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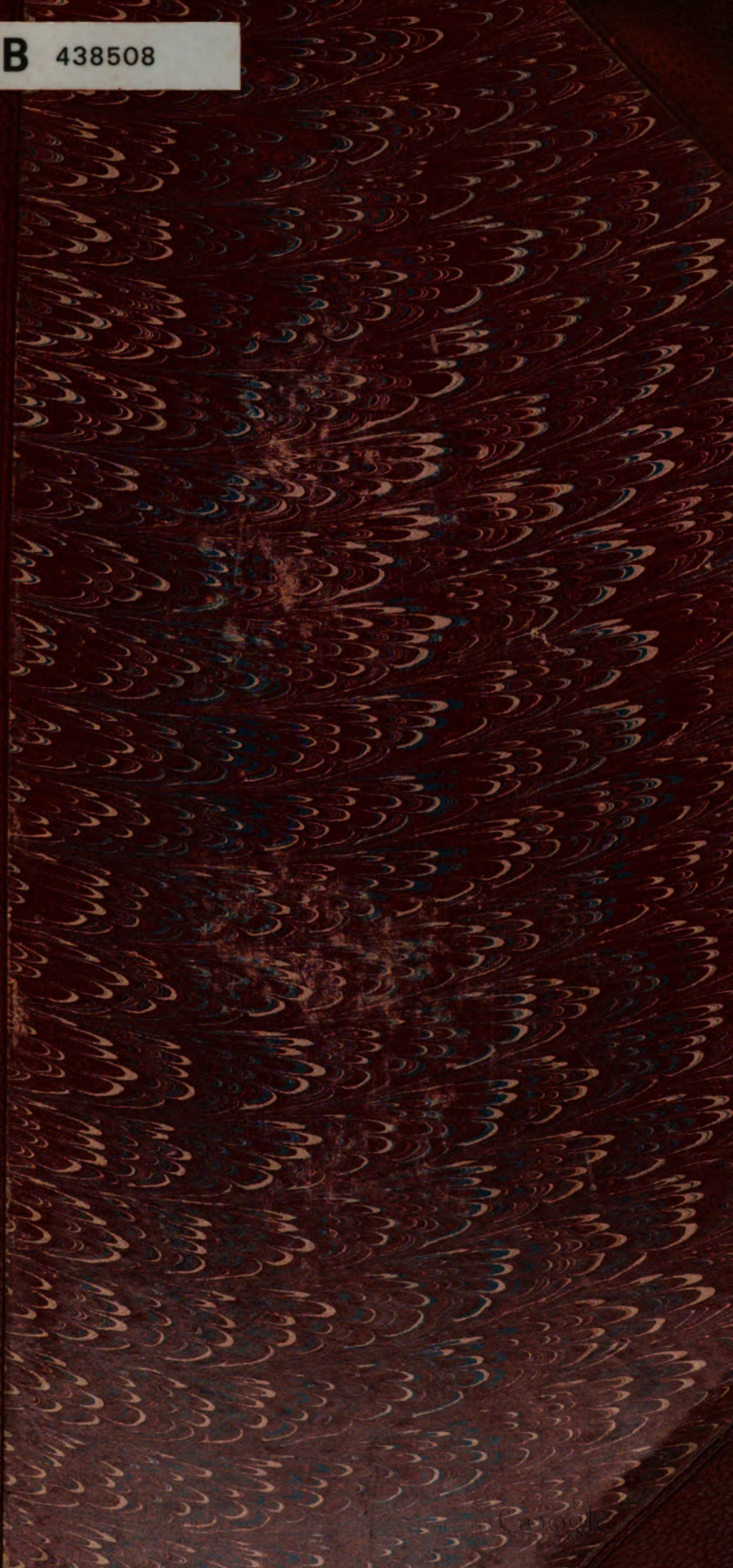
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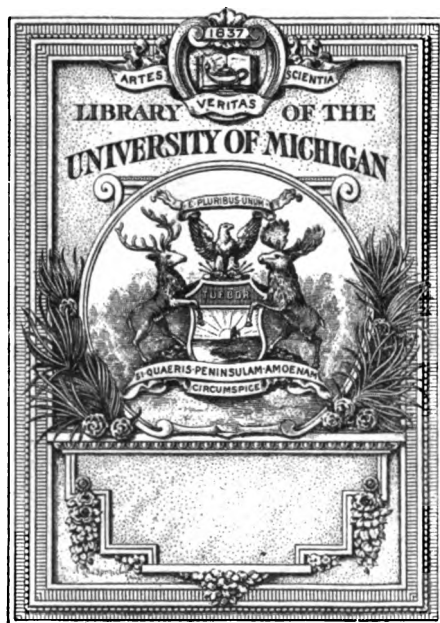
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# **SPECIAL CONSULAR REPORTS.**

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**BOOK CLOTH IN FOREIGN COUNTRIES.**

**MARKET FOR READY-MADE CLOTHING IN LATIN  
AMERICA.**

**FOREIGN IMPORTS OF AMERICAN TOBACCO.**

**CIGAR AND CIGARETTE INDUSTRY  
IN LATIN AMERICA.**

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**VOL. XX.—PART I.**

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**REPORTS FROM CONSULS OF THE UNITED STATES IN ANSWER TO  
INSTRUCTIONS FROM THE DEPARTMENT OF STATE.**

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**Issued from the Bureau of Foreign Commerce,  
Department of State.**



**WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1900.**



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# PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.<sup>1</sup>

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880-81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885-86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs of Central America, etc., are exhausted, and the Department is therefore unable to supply copies.

In 1890 the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Flies in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Slave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

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Vol. 12 (1895).—Highways of Commerce. (New edition, 1899.)

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Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe, Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (1899).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia. Part IV. Africa. Part V. Australasia and Polynesia. (Parts III, IV, and V not yet published.)

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Disposal of Sewage and Garbage, Foreign Trade in Coal Tar, Flies in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, India Rubber, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Soap Trade, etc., Sericulture, Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published, in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments and War Decrees of Spain.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

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In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

<sup>1</sup> Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State July 1, 1897.

## VALUES OF FOREIGN COINS AND CURRENCIES.

---

The following statements show the valuation of foreign coins, as given by the Director of the United States Mint and published by the Secretary of the Treasury, in compliance with the first section of the act of March 3, 1873, viz: "That the value of foreign coins, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the value of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the 1st day of January by the Secretary of the Treasury."

In compliance with the foregoing provisions of law, annual statements were issued by the Treasury Department, beginning with that issued on January 1, 1874, and ending with that issued on January 1, 1890. Since that date, in compliance with the act of October 1, 1890, these valuation statements have been issued quarterly, beginning with the statement issued on January 1, 1891.

The fact that the market exchange value of foreign coins differs in many instances from that given by the United States Treasury has been repeatedly called to the attention of the Bureau of Foreign Commerce. An explanation of the basis of the quarterly valuations was asked from the United States Director of the Mint, and under date of February 7, 1898, Mr. R. E. Preston made the following statement:

"When a country has the single gold standard, the value of its standard coins is estimated to be that of the number of grains fine of gold in them, 480 grains being reckoned equivalent to \$20.87 in United States gold, and a smaller number of grains in proportion. When a country has the double standard, but keeps its full legal-tender silver coins at par with gold, the coins of both gold and silver are calculated on the basis of the gold value.

"The value of the standard coins of countries with the single silver standard is calculated to be that of the average market value of the pure metal they contained during the three months preceding the date of the proclamation of their value in United States gold by the Secretary of the Treasury. The value of the gold coins of silver-standard countries is calculated at that of the pure gold they contain, just as if they had the single gold standard.

"These valuations are used in estimating the values of all foreign merchandise exported to the United States. The value of the Indian rupee, although calculated according to law at the value of the pure metal contained therein, has a commercial value above the value of the silver bullion; consequently the value for customs purposes is determined in each case by the consular certificates attached to the invoice of exports from that country to the United States."

The following statements, running from January 1, 1874, to January 1, 1898, have been prepared to assist in computing the values in American money of the trade, prices, values, wages, etc., of and in foreign countries, as given in consular and other reports. The series of years are given so that computations may be made for each year in the proper money value of such year. In hurried computations, the reductions of foreign currencies into American currency, no matter for how many years, are too often made on the bases of latest valuations. All computations of values, trade, wages, prices, etc., of and in the "fluctuating-currency countries" should be made in the values of their currencies in each year up to and including 1890, and in the quarterly valuations thereafter.

To meet typographical requirements, the quotations for the years 1876, 1877, 1879, 1881, 1882, and 1891-1894 are omitted, these years being selected as showing the least fluctuations when compared with years immediately preceding and following.

To save unnecessary repetition, the estimates of valuations are divided into three classes, viz: (A) countries with fixed currencies, (B) countries with fluctuating currencies, and (C) quarterly valuations of fluctuating currencies.

## A.—Countries with fixed currencies.

The following official (United States Treasury) valuations of foreign coins do not include "rates of exchange."

| Countries.                                   | Standard.        | Monetary unit.        | Value in United States gold. | Coins.   |
|--|------------------|-----------------------|------------------------------|--|
| Argentine Republic <sup>1</sup> .            | Gold and silver. | Peso .....            | \$0.96, 5                    | Gold—argentine (\$4.82, 4) and $\frac{1}{2}$ argentine; silver—peso and divisions.                             |
| Austria-Hungary <sup>2</sup> .....           | Gold.....        | Crown .....           | .20, 3                       | Gold—20 crowns (\$4.06, 2) and 10 crowns.  |
| Belgium .....                                | Gold and silver. | Franc .....           | .19, 3                       | Gold—10 and 20 franc pieces; silver—5 francs.  |
| Brazil .....                                 | Gold.....        | Milreis .....         | .54, 6                       | Gold—5, 10, and 20 milreis; silver— $\frac{1}{2}$ , 1, and 2 milreis.  |
| British North America (except Newfoundland). | .....do.....     | Dollar .....          | 1.00                         |  |
| Chile.....                                   | .....do.....     | Peso .....            | .36, 5                       | Gold—escudo (\$1.25), doubloon (\$3.65), and condor (\$7.30); silver—peso and divisions.                       |
| Costa Rica .....                             | .....do.....     | Colon .....           | .46, 5                       | Gold—2, 5, 10, and 20 colons; silver—5, 10, 25, and 50 centesimos.   |
| Cuba .....                                   | Gold and silver. | .....do.....          | .92, 6                       | Gold—doubloon (\$5.01, 7); silver—peso (60 cents).   |
| Denmark .....                                | Gold.....        | Crown .....           | .26, 8                       | Gold—10 and 20 crowns.   |
| Egypt .....                                  | .....do.....     | Pound (100 piasters). | 4.94, 3                      | Gold—10, 20, 50, and 100 piasters; silver—1, 2, 10, and 20 piasters.   |
| Finland .....                                | .....do.....     | Mark .....            | .19, 3                       | Gold—10 and 20 marks (\$1.93 and \$3.85, 9).   |
| France .....                                 | Gold and silver. | Franc .....           | .19, 3                       | Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.   |
| Germany .....                                | Gold.....        | Mark .....            | .23, 8                       | Gold—5, 10, and 20 marks.  |
| Great Britain .....                          | .....do.....     | Pound sterling ..     | 4.86, 6 $\frac{1}{2}$        | Gold—sovereign (pound sterling) and half sovereign.  |
| Greece .....                                 | Gold and silver. | Drachma .....         | .19, 3                       | Gold—5, 10, 20, 50, and 100 drachmas; silver—5 drachmas.   |
| Haiti.....                                   | .....do.....     | Gourde .....          | .96, 5                       | Silver—gourde.   |
| Italy .....                                  | .....do.....     | Lira .....            | .19, 3                       | Gold—5, 10, 20, 50, and 100 lire; silver—6 lire.   |
| Japan <sup>3</sup> .....                     | Gold.....        | Yen .....             | .49, 8                       | Gold—1, 2, 5, 10, and 20 yen.  |
| Liberia .....                                | .....do.....     | Dollar .....          | 1.00                         |  |
| Netherlands <sup>4</sup> .....               | Gold and silver. | Florin .....          | .40, 2                       | Gold—10 florin; silver— $\frac{1}{2}$ , 1, and 2 $\frac{1}{2}$ florins.  |
| Newfoundland .....                           | Gold.....        | Dollar .....          | 1.01, 4                      | Gold—\$2 (\$2.02, 7).  |
| Portugal .....                               | .....do.....     | Milreis .....         | 1.06                         | Gold—1, 2, 5, and 10 milreis.  |
| Russia <sup>5</sup> .....                    | .....do.....     | Ruble .....           | .51, 4                       | Gold—imperial (\$7.718), $\frac{1}{2}$ imperial (\$3.80), and 1 ruble; silver— $\frac{1}{2}$ , 1, and 1 ruble. |
| Spain .....                                  | Gold and silver. | Peseta .....          | .19, 3                       | Gold—25 pesetas; silver—5 pesetas.   |
| Sweden and Norway.                           | Gold.....        | Crown .....           | .26, 8                       | Gold—10 and 20 crowns.   |
| Switzerland .....                            | Gold and silver. | Franc .....           | .19, 3                       | Gold—5, 10, 20, 50, and 100 francs; silver—5 francs.   |
| Turkey .....                                 | Gold.....        | Plaster .....         | .04, 4                       | Gold—25, 50, 100, 200, and 500 piasters.   |
| Uruguay .....                                | .....do.....     | Peso .....            | 1.03, 4                      | Gold—peso; silver—peso and divisions.  |
| Venezuela .....                              | Gold and silver. | Bollivar.....         | .19, 3                       | Gold—5, 10, 20, 50, and 100 bolivars; silver—5 bolivars.   |

<sup>1</sup>In 1874-1875 the gold standard prevailed.

<sup>2</sup>The gold standard was adopted Oct. 1, 1892. (See Consular Reports, No. 147, p. 623.) Values are still, however, frequently expressed in the florin or gulden, which is worth 2 crowns or 40.6 cents.

<sup>3</sup>Gold standard adopted Oct. 1, 1897. (See Consular Reports, No. 201, p. 259.)

<sup>4</sup>See note to table of fluctuating currencies.

<sup>5</sup>For an account of the adoption of the gold standard, see Review of the World's Commerce, 1896-97, p. 254.

## B.—Countries with fluctuating currencies, 1874–1890.

| Countries.                   | Standard.           | Monetary unit.   | Value in terms of the United States gold dollar<br>on January 1— |          |          |          |          |          |
|------------------------------|---------------------|--|--|----------|----------|----------|----------|----------|
|                              |                     |  | 1874.  | 1875.    | 1878.    | 1880.    | 1883.    | 1884.    |
| Austria-Hungary <sup>1</sup> | Silver              | Florin   | \$0.47,6   | \$0.45,3 | \$0.45,3 | \$0.41,3 | \$0.40,1 | \$0.39,8 |
| Bolivia                      | do                  | Dollar until<br>1890; bolli-<br>viano there-<br>after. | .96,5  | .96,5    | .96,5    | .83,6    | .81,2    | .80,6    |
| Central America              | do                  | Peso   | .96,5  | .91,8    | .91,8    | .83,6    | .....    | .....    |
| China                        | do                  | Haikwan tael   | 1.61   | 1.61     | .....    | .....    | .....    | .....    |
| Colombia                     | do                  | Peso   | .96,5  | .96,5    | .96,5    | .83,6    | .81,2    | .80,6    |
| Ecuador                      | do                  | do   | .96,5  | .91,8    | .91,8    | .83,6    | .81,2    | .80,6    |
| Egypt <sup>2</sup>           | Gold                | Pound (100<br>piasters).                               | .....  | .....    | 4.97,4   | 4.97,4   | 4.90     | 4.90     |
| India                        | Silver              | Rupee  | .45,8  | .43,6    | .43,6    | .39,7    | .38,6    | .38,8    |
| Japan                        | (Gold<br>Silver)    | Yen  | .99,7  | .99,7    | .99,7    | .99,7    | .87,6    | .86,9    |
| Mexico                       | do                  | Dollar   | 1.04,74  | .99,8    | .99,8    | .90,9    | .88,2    | .87,5    |
| Netherlands <sup>3</sup>     | Gold and<br>silver. | Florin   | .40,5  | .38,5    | .38,5    | .40,2    | .....    | .....    |
| Peru                         | Silver              | Sol  | .92,5  | .91,8    | .91,8    | .83,6    | .81,2    | .80,6    |
| Russia                       | do                  | Ruble  | .77,17   | .73,4    | .73,4    | .66,9    | .65      | .64,5    |
| Tripoli                      | do                  | Mahbub of 20<br>piasters.                              | .87,09   | .82,9    | .82,9    | .74,8    | .73,3    | .72,7    |

| Countries.                   | Standard.        | Monetary unit.   | Value in terms of the United States gold dollar<br>on January 1— |          |          |          |          |        |
|------------------------------|------------------|--|--|----------|----------|----------|----------|--------|
|                              |                  |  | 1885.  | 1886.    | 1887.    | 1888.    | 1889.    | 1890.  |
| Austria-Hungary <sup>1</sup> | Silver           | Florin   | \$0.39,3   | \$0.37,1 | \$0.35,9 | \$0.34,5 | \$0.33,6 | \$0.42 |
| Bolivia                      | do               | Dollar until<br>1890; bolli-<br>viano there-<br>after. | .79,5  | .75,1    | .72,7    | .69,9    | .68      | .85    |
| Central America              | do               | Peso   | .....  | .....    | .....    | .69,9    | .68      | .85    |
| Colombia                     | do               | do   | .79,5  | .75,1    | .72,7    | .69,9    | .68      | .85    |
| Ecuador                      | do               | do   | .79,5  | .75,1    | .72,7    | .69,9    | .68      | .85    |
| Egypt <sup>2</sup>           | Gold             | Pound (100<br>piasters).                               | 4.90   | 4.90     | 4.94,3   | 4.94,3   | 4.94,3   | 4.94,3 |
| India                        | Silver           | Rupee  | .37,8  | .35,7    | .34,6    | .32,2    | .32,3    | .40,4  |
| Japan                        | (Gold<br>Silver) | Yen  | .....  | .....    | .99,7    | .99,7    | .99,7    | .99,7  |
| Mexico                       | do               | Dollar   | .85,8  | .81      | .78,4    | .75,3    | .73,4    | .91,7  |
| Peru                         | do               | Sol  | .86,4  | .81,6    | .79      | .75,9    | .73,9    | .92,3  |
| Russia                       | do               | Ruble  | .79,5  | .75,1    | .72,7    | .69,9    | .68      | .85    |
| Tripoli                      | do               | Mahbub of 20<br>piasters.                              | .63,6  | .60,1    | .58,2    | .55,9    | .54,4    | .68    |
|                              |                  |  | .71,7  | .67,7    | .65,6    | .63      | .61,4    | .76,7  |

<sup>1</sup> See footnote, table of fixed currencies.<sup>2</sup> The Egyptian pound became fixed in value at \$4.94,3 in 1887.<sup>3</sup> The Netherlands florin fluctuated up to the year 1880, when it became fixed at 40.2 cents.

## C.—Quarterly valuations of fluctuating currencies.

| Countries.               | Monetary unit.         | 1897.     |           |           |           | 1898.     |           |           |           |
|--------------------------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                          |                        | Jan. 1.   | Apr. 1.   | July 1.   | Oct. 1.   | Jan. 1.   | Apr. 1.   | July 1.   | Oct. 1.   |
| Bolivia .....            | Silver boliviano ..... | \$0.47, 4 | \$0.46, 8 | \$0.44, 3 | \$0.41, 2 | \$0.42, 4 | \$0.40, 9 | \$0.41, 8 | \$0.43, 6 |
| Central America .....    | Silver peso .....      | .47, 4    | .46, 5    | .44, 8    | .41, 2    | .41, 4    | .40, 9    | .41, 8    | .43, 6    |
|                          | Amoy tael .....        | .76, 7    | .75, 7    | .71, 7    | .66, 4    | .68, 5    | .66, 2    | .67, 6    | .70, 6    |
|                          | Canton tael .....      | .76, 5    | .75, 5    | .71, 5    | .66, 4    | .68, 3    | .66       | .67, 4    | .70, 4    |
|                          | Chefoo tael .....      | .73, 3    | .72, 4    | .68, 6    | .63, 7    | .65, 5    | .63, 8    | .64, 6    | .67, 5    |
|                          | Chinkiang tael .....   | .74, 9    | .73, 9    | .70       | .65, 1    | .66, 9    | .64, 6    | .66       | .69       |
| China .....              | Fuchau tael .....      | .70, 9    | .70       | .66, 3    | .61, 6    | .63, 4    | .61, 2    | .62, 5    | .65, 3    |
|                          | Hankau tael .....      | .78       | .77       | .73, 1    | .67, 8    | .69, 7    | .67, 3    | .68, 8    | .71, 8    |
|                          | Hankau tael .....      | .71, 7    | .70, 8    | .67, 1    | .62, 3    | .64, 1    | .61, 9    | .63, 2    | .66       |
|                          | Ningpo tael .....      | .73, 7    | .72, 8    | .68, 9    | .64       | .64, 3    | .63       | .65       | .67, 9    |
|                          | Niuchwang tael .....   | .71, 9    | .71       | .67, 2    | .62, 5    | .65, 9    | .62       | .63, 4    | .66, 2    |
|                          | Shanghai tael .....    | .70       | .69, 1    | .65, 5    | .60, 8    | .62, 6    | .60, 4    | .61, 7    | .64, 5    |
|                          | Swatow tael .....      | .70, 8    | .69, 9    | .66, 2    | .61, 5    | .63, 3    | .61, 1    | .62, 4    | .65, 2    |
|                          | Takao tael .....       | .77, 2    | .76, 2    | .72, 2    | .67       | .66       | .66, 6    | .68       | .71       |
| Colombia .....           | Tientsin tael .....    | .74, 3    | .73, 4    | .69, 5    | .64, 6    | .66, 4    | .64, 1    | .65, 5    | .68, 4    |
| Ecuador .....            | Silver peso .....      | .47, 4    | .46, 8    | .44, 3    | .41, 2    | .42, 4    | .40, 9    | .41, 8    | .43, 6    |
| Ecuador .....            | do .....               | .47, 4    | .46, 8    | .44, 3    | .41, 2    | .42, 4    | .40, 9    | .41, 8    | .43, 6    |
| India <sup>1</sup> ..... | Silver rupee .....     | .22, 5    | .22, 2    | .21, 1    | .19, 6    | .20, 1    | .19, 1    | .19, 9    | .20, 7    |
| Japan .....              | Silver yen .....       | .51, 1    | .50, 5    |           |           |           |           |           |           |
| Mexico .....             | Silver dollar .....    | .51, 5    | .50, 8    | .48, 2    | .44, 6    | .46       | .44, 4    | .45, 4    | .47, 4    |
| Persia .....             | Silver kran .....      | .08, 7    | .08, 6    | .07, 6    |           | .07, 8    | .07, 5    | .07, 7    | .08       |
| Peru .....               | Silver sol .....       | .47, 4    | .46, 8    | .44, 3    | .41, 2    | .42, 4    | .40, 9    | .41, 8    | .43, 6    |
| Russia .....             | Silver ruble .....     | .37, 9    | .37, 4    |           |           |           |           |           |           |

| Countries.               | Monetary unit.         | 1899.     |           |           |           | 1900.     |           |
|--------------------------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                          |                        | Jan. 1.   | Apr. 1.   | July 1.   | Oct. 1.   | Jan. 1.   | Apr. 1.   |
| Bolivia .....            | Silver boliviano ..... | \$0.43, 9 | \$0.43, 4 | \$0.44, 3 | \$0.43, 6 | \$0.42, 7 | \$0.43, 6 |
| Central America .....    | Silver peso .....      | .43, 9    | .43, 4    | .44, 3    | .43, 6    | .42, 7    | .43, 6    |
|                          | Amoy tael .....        | .71       | .70, 2    | .71, 6    | .70, 5    | .69, 1    | .70, 5    |
|                          | Canton tael .....      | .70, 8    | .70       | .71, 4    | .70, 3    | .68, 9    | .70, 3    |
|                          | Chefoo tael .....      | .67, 9    | .67, 2    | .68, 4    | .67, 4    | .66, 1    | .67, 4    |
|                          | Chinkiang tael .....   | .69, 3    | .68, 6    | .69, 9    | .68, 9    | .67, 5    | .68, 8    |
|                          | Fuchau tael .....      | .65, 6    | .65       | .66, 2    | .65, 2    | .64       | .65, 2    |
|                          | Hankau tael .....      | .72, 2    | .71, 4    | .72, 8    | .71, 8    | .70, 3    | .71, 7    |
|                          | Hankau tael .....      | .66, 4    | .65, 7    | .67       | .66       | .64, 7    | .65, 9    |
|                          | Ningpo tael .....      | .68, 2    | .67, 5    | .68, 8    | .67, 8    | .66, 5    | .67, 7    |
|                          | Niuchwang tael .....   | .66, 5    | .65, 9    | .67, 1    | .66, 1    | .64, 8    | .66, 1    |
| China .....              | Shanghai tael .....    | .64, 8    | .64, 1    | .65, 4    | .64, 4    | .63, 1    | .64, 4    |
|                          | Swatow tael .....      | .65, 5    | .64, 9    | .66, 1    | .65, 1    | .63, 9    | .65, 1    |
|                          | Takao tael .....       | .71, 4    | .70, 7    | .72       | .71       | .69, 6    | .70, 9    |
|                          | Tientsin tael .....    | .68, 8    | .68       | .69, 4    | .68, 3    | .67       | .68, 3    |
| Colombia .....           | Silver peso .....      | .43, 9    | .43, 4    | .44, 3    | .43, 6    | .42, 7    | .43, 6    |
| Ecuador .....            | do .....               | .43, 9    | .43, 4    | .44, 3    | .43, 6    | .42, 7    | .43, 6    |
| India <sup>1</sup> ..... | Silver rupee .....     | .20, 8    | .20, 6    | .21       | .20, 7    | .20, 3    | .20, 7    |
| Mexico .....             | Silver dollar .....    | .47, 7    | .47, 2    | .48, 1    | .47, 4    | .46, 4    | .47, 3    |
| Persia .....             | Silver kran .....      | .08, 1    | .08       | .08, 2    | .08       | .07, 9    | .08       |
| Peru .....               | Silver sol .....       | .43, 9    | .43, 4    | .44, 3    | .43, 6    | .42, 7    | .43, 6    |

<sup>1</sup> The commercial value of the rupee to be determined by consular certificate.

## FOREIGN WEIGHTS AND MEASURES.

The following table embraces only such weights and measures as are given from time to time in Consular Reports and in Commercial Relations:

*Foreign weights and measures, with American equivalents.*

| Denominations.                 | Where used.                     | American equivalents.                          |
|--------------------------------|---------------------------------|--|
| Almude                         | Portugal                        | 4.422 gallons.                                 |
| Ardeb                          | Egypt                           | 7.6807 bushels.                                |
| Are                            | Metric                          | 0.02471 acre.                                  |
| Arobe                          | Paraguay                        | 25 pounds.                                     |
| Arratel or libra               | Portugal                        | 1.011 pounds.                                  |
| Arroba (dry)                   | Argentine Republic.             | 25.3175 pounds.                                |
| Do.                            | Brazil                          | 32.38 pounds.                                  |
| Do.                            | Cuba                            | 25.3664 pounds.                                |
| Do.                            | Portugal                        | 32.38 pounds.                                  |
| Do.                            | Spain                           | 25.36 pounds.                                  |
| Do.                            | Venezuela                       | 25.4024 pounds.                                |
| Arroba (liquid)                | Cuba, Spain, and Venezuela.     | 4.263 gallons.                                 |
| Arshine                        | Russia                          | 28 inches.                                     |
| Arshine (square)               | do.                             | 5.44 square feet.                              |
| Artel                          | Morocco                         | 1.12 pounds.                                   |
| Barril                         | Argentine Republic and Mexico.  | 20.0787 gallons.                               |
| Barrel                         | Malta (customs)                 | 11.4 gallons.                                  |
| Do.                            | Spain (raisins)                 | 100 pounds.                                    |
| Berkovets.                     | Russia                          | 361.12 pounds.                                 |
| Bongkal                        | India                           | 832 grains.                                    |
| Bouw                           | Sumatra                         | 7,096.5 square meters.                         |
| Bu.                            | Japan                           | 0.1 inch.                                      |
| Butt (wine)                    | Spain                           | 140 gallons.                                   |
| Caffiso                        | Malta                           | 5.4 gallons.                                   |
| Candy                          | India (Bombay)                  | 529 pounds.                                    |
| Do.                            | India (Madras)                  | 500 pounds.                                    |
| Cantar                         | Morocco                         | 113 pounds.                                    |
| Do.                            | Syria (Damascus)                | 575 pounds.                                    |
| Do.                            | Turkey                          | 124.7086 pounds.                               |
| Cantaro (cantar)               | Malta                           | 175 pounds.                                    |
| Carga                          | Mexico and Salvador.            | 300 pounds.                                    |
| Catty                          | China                           | 1.333 $\frac{1}{3}$ (1 $\frac{1}{3}$ ) pounds. |
| Do.                            | Japan                           | 1.31 pounds.                                   |
| Do.                            | Java, Siam, and Malacca.        | 1.35 pounds.                                   |
| Do.                            | Sumatra                         | 2.12 pounds.                                   |
| Centaro.                       | Central America.                | 4.2631 gallons.                                |
| Centner                        | Bremen and Brunswick            | 117.5 pounds.                                  |
| Do.                            | Darmstadt                       | 110.24 pounds.                                 |
| Do.                            | Denmark and Norway              | 110.11 pounds.                                 |
| Do.                            | Nuremberg                       | 112.43 pounds.                                 |
| Do.                            | Prussia.                        | 113.44 pounds.                                 |
| Do.                            | Sweden                          | 93.7 pounds.                                   |
| Do.                            | Vienna.                         | 123.5 pounds.                                  |
| Do.                            | Zollverein                      | 111.24 pounds.                                 |
| Do.                            | Double or metric.               | 220.46 pounds.                                 |
| Chih.                          | China                           | 14 inches.                                     |
| Coyan                          | Sarawak                         | 3.086 pounds.                                  |
| Do.                            | Siam (Koyan)                    | 2.667 pounds.                                  |
| Cuadra                         | Argentine Republic.             | 4.2 acres.                                     |
| Do.                            | Paraguay                        | 78.9 yards.                                    |
| Do.                            | Paraguay (square)               | 8.077 square feet.                             |
| Do.                            | Uruguay                         | Nearly 2 acres.                                |
| Cubic meter                    | Metric                          | 35.3 cubic feet.                               |
| Cwt. (hundredweight)           | British                         | 112 pounds.                                    |
| Dessiatine                     | Russia                          | 2.6897 acres.                                  |
| Do.                            | Spain                           | 1.599 bushels.                                 |
| Drachme                        | Greece                          | Half ounce.                                    |
| Egyptian weights and measures. | (See Consular Reports No. 144.) |  |

<sup>1</sup> More frequently called "Kin." dupols.

Among merchants in the treaty ports it equals 1.33 $\frac{1}{3}$  pounds avoirdupois.

*Foreign weights and measures, with American equivalents—Continued.*

| Denominations.       | Where used.                     | American equivalents.   |
|----------------------|---------------------------------|---|
| Fanega (dry).....    | Central America.....            | 1.5745 bushels.   |
| Do.....              | Chile.....                      | 2.575 bushels.  |
| Do.....              | Cuba.....                       | 1.599 bushels.  |
| Do.....              | Mexico.....                     | 1.54728 bushels.  |
| Do.....              | Morocco.....                    | Strike fanega, 70 lbs.;<br>full fanega, 118 lbs.  |
| Do.....              | Uruguay (double).....           | 7.776 bushels.  |
| Do.....              | Uruguay (single).....           | 3.888 bushels.  |
| Do.....              | Venezuela.....                  | 1.599 bushels.  |
| Fanega (liquid)..... | Spain.....                      | 16 gallons.   |
| Feddan.....          | Egypt.....                      | 1.03 acres.   |
| Frail (raisins)..... | Spain.....                      | 50 pounds.  |
| Frasco.....          | Argentine Republic.....         | 2.5096 quarts.  |
| Do.....              | Mexico.....                     | 2.5 quarts.   |
| Fuder.....           | Luxemburg.....                  | 264.17 gallons.   |
| Garnice.....         | Russian Poland.....             | 0.88 gallon.  |
| Gram.....            | Metric.....                     | 15.432 grains.  |
| Hectare.....         | do.....                         | 2.471 acres.  |
| Hectoliter:          |                                 |   |
| Dry.....             | do.....                         | 2.888 bushels.  |
| Liquid.....          | do.....                         | 26.417 gallons.   |
| Joch.....            | Austria-Hungary.....            | 1.422 acres.  |
| Ken.....             | Japan.....                      | 6 feet.   |
| Kilogram (kilo)..... | Metric.....                     | 2.2046 pounds.  |
| Kilometer.....       | do.....                         | 0.621376 mile.  |
| Klafter.....         | Russia.....                     | 216 cubic feet.   |
| Koku.....            | Japan.....                      | 4.9629 bushels.   |
| Kerrec.....          | Russia.....                     | 3.5 bushels.  |
| Last.....            | Belgium and Holland.....        | 85.134 bushels.   |
| Do.....              | England (dry malt).....         | 82.52 bushels.  |
| Do.....              | Germany.....                    | 2 metric tons (4,480 lbs.).   |
| Do.....              | Prussia.....                    | 112.29 bushels.   |
| Do.....              | Russian Poland.....             | 11½ bushels.  |
| Do.....              | Spain (salt).....               | 4,760 pounds.   |
| League (land).....   | Paraguay.....                   | 4,633 acres.  |
| Li.....              | China.....                      | 2.115 feet.   |
| Libra (pound).....   | Castilian.....                  | 7.100 grains (troy).  |
| Do.....              | Argentine Republic.....         | 1.0127 pounds.  |
| Do.....              | Central America.....            | 1.043 pounds.   |
| Do.....              | Chile.....                      | 1.014 pounds.   |
| Do.....              | Cuba.....                       | 1.0161 pounds.  |
| Do.....              | Mexico.....                     | 1.01465 pounds.   |
| Do.....              | Peru.....                       | 1.0143 pounds.  |
| Do.....              | Portugal.....                   | 1.011 pounds.   |
| Do.....              | Uruguay.....                    | 1.0143 pounds.  |
| Do.....              | Venezuela.....                  | 1.0161 pounds.  |
| Liter.....           | Metric.....                     | 1.0567 quarts.  |
| Livre (pound).....   | Greece.....                     | 1.1 pounds.   |
| Do.....              | Gulana.....                     | 1.0791 pounds.  |
| Load.....            | England (timber).....           | Square, 50 cubic feet;<br>unhewn, 40 cubic feet;<br>inch planks, 600 super-<br>ficial feet. |
| Manzana.....         | Costa Rica.....                 | 1½ acres.   |
| Do.....              | Nicaragua and Salvador.....     | 1.727 acres.  |
| Marc.....            | Bolivia.....                    | 0.507 pound.  |
| Maund.....           | India.....                      | 82½ pounds.   |
| Meter.....           | Metric.....                     | 39.37 inches.   |
| Mil.....             | Denmark.....                    | 4.68 miles.   |
| Do.....              | Denmark (geographical).....     | 4.61 miles.   |
| Milla.....           | Nicaragua and Honduras.....     | 1.1498 miles.   |
| Morgen.....          | Prussia.....                    | 0.63 acre.  |
| Oke.....             | Egypt.....                      | 2.7225 pounds.  |
| Do.....              | Greece.....                     | 2.84 pounds.  |
| Do.....              | Hungary.....                    | 3.0617 pounds.  |
| Do.....              | Turkey.....                     | 2.86418 pounds.   |
| Do.....              | Hungary and Wallachia.....      | 2.5 pints.  |
| Pic.....             | Egypt.....                      | 21½ inches.   |
| Picul.....           | Borneo and Celebes.....         | 135.64 pounds.  |
| Do.....              | China, Japan, and Sumatra.....  | 133½ pounds.  |
| Do.....              | Java.....                       | 135.1 pounds.   |
| Do.....              | Philippine Islands (hemp).....  | 139.45 pounds.  |
| Do.....              | Philippine Islands (sugar)..... | 140 pounds.   |
| Pie.....             | Argentine Republic.....         | 0.9478 foot.  |
| Do.....              | Castile.....                    | 0.91407 foot.   |
| Pik.....             | Turkey.....                     | 27.9 inches.  |
| Food.....            | Russia.....                     | 36.112 pounds.  |
| Fund (pound).....    | Denmark and Sweden.....         | 1.102 pounds.   |
| Quarter.....         | Great Britain.....              | 8.252 bushels.  |
| Do.....              | London (coal).....              | 36 bushels.   |
| Quintal.....         | Argentine Republic.....         | 101.42 pounds.  |
| Do.....              | Brazil.....                     | 130.06 pounds.  |

*Foreign weights and measures, with American equivalents—Continued.*

| Denominations.                 | Where used.                           | American equivalents.       |
|--------------------------------|---------------------------------------|-----------------------------|
| Quintal.....                   | Castile, Chile, Mexico, and Peru..... | 101.61 pounds.              |
| Do.....                        | Greece.....                           | 123.2 pounds.               |
| Do.....                        | Newfoundland (fish).....              | 112 pounds.                 |
| Do.....                        | Paraguay.....                         | 100 pounds.                 |
| Do.....                        | Syria.....                            | 125 pounds.                 |
| Do.....                        | Metric.....                           | 220.46 pounds.              |
| Rottle.....                    | Palestine.....                        | 6 pounds.                   |
| Do.....                        | Syria.....                            | 54 pounds.                  |
| Sagen.....                     | Russia.....                           | 7 feet.                     |
| Salm.....                      | Malta.....                            | 490 pounds.                 |
| Se.....                        | Japan.....                            | 0.02451 acre.               |
| Seer.....                      | India.....                            | 1 pound 13 ounces.          |
| Shaku.....                     | Japan.....                            | 11.9306 inches.             |
| Sho.....                       | do.....                               | 1.6 quarts.                 |
| Standard (St. Petersburg)..... | Lumber measure.....                   | 165 cubic feet.             |
| Stone.....                     | British.....                          | 14 pounds.                  |
| Suerte.....                    | Uruguay.....                          | 2,700 cuadras (see Cuadra). |
| Sun.....                       | Japan.....                            | 1.193 inches.               |
| Tael.....                      | Cochin China.....                     | 590.75 grains (troy).       |
| Tan.....                       | Japan.....                            | 0.25 acre.                  |
| To.....                        | do.....                               | 2 pecks.                    |
| Ton.....                       | Space measure.....                    | 40 cubic feet.              |
| Tonde (cereals).....           | Denmark.....                          | 3.94783 bushels.            |
| Tondeland.....                 | do.....                               | 1.36 acres.                 |
| Tsubo.....                     | Japan.....                            | 6 feet square.              |
| Tsun.....                      | China.....                            | 1.41 inches.                |
| Tunna.....                     | Sweden.....                           | 4.5 bushels.                |
| Tunnland.....                  | do.....                               | 1.22 acres.                 |
| Vara.....                      | Argentine Republic.....               | 34.1208 inches.             |
| Do.....                        | Castile.....                          | 0.914117 yard.              |
| Do.....                        | Central America.....                  | 32.87 inches.               |
| Do.....                        | Chile and Peru.....                   | 33.367 inches.              |
| Do.....                        | Cuba.....                             | 33.384 inches.              |
| Do.....                        | Curaçao.....                          | 33.375 inches.              |
| Do.....                        | Mexico.....                           | 33 inches.                  |
| Do.....                        | Paraguay.....                         | 34 inches.                  |
| Do.....                        | Venezuela.....                        | 33.384 inches.              |
| Vedro.....                     | Russia.....                           | 2.707 gallons.              |
| Vergees.....                   | Isle of Jersey.....                   | 71.1 square rods.           |
| Verst.....                     | Russia.....                           | 0.663 mile.                 |
| Vlocka.....                    | Russian Poland.....                   | 41.98 acres.                |

## METRIC WEIGHTS AND MEASURES.

## Metric weights:

Milligram ( $\frac{1}{1000}$  gram) equals 0.0154 grain.  
 Centigram ( $\frac{1}{100}$  gram) equals 0.1543 grain.  
 Decigram ( $\frac{1}{10}$  gram) equals 1.5432 grains.  
 Gram equals 15.432 grains.  
 Decagram (10 grams) equals 0.3527 ounce.  
 Hectogram (100 grams) equals 3.5274 ounces.  
 Kilogram (1,000 grams) equals 2.2046 pounds.  
 Myriagram (10,000 grams) equals 22.046 pounds.  
 Quintal (100,000 grams) equals 220.46 pounds.  
 Millier or tonnea—ton (1,000,000 grams) equals 2,204.6 pounds.

## Metric dry measures:

Milliliter ( $\frac{1}{1000}$  liter) equals 0.061 cubic inch.  
 Centiliter ( $\frac{1}{100}$  liter) equals 0.6102 cubic inch.  
 Deciliter ( $\frac{1}{10}$  liter) equals 6.1022 cubic inches.  
 Liter equals 0.908 quart.  
 Decaliter (10 liters) equals 9.08 quarts.  
 Hectoliter (100 liters) equals 2.838 bushels.  
 Kiloliter (1,000 liters) equals 1.308 cubic yards.

## Metric liquid measures:

Milliliter ( $\frac{1}{1000}$  liter) equals 0.0388 fluid ounce.  
 Centiliter ( $\frac{1}{100}$  liter) equals 0.338 fluid ounce.  
 Deciliter ( $\frac{1}{10}$  liter) equals 0.845 gill.  
 Liter equals 1.0567 quarts.  
 Decaliter (10 liters) equals 2.6418 gallons.  
 Hectoliter (100 liters) equals 26.418 gallons.  
 Kiloliter (1,000 liters) equals 264.18 gallons.

## METRIC WEIGHTS AND MEASURES—continued.

## Metric measures of length:

Millimeter ( $\frac{1}{1000}$  meter) equals 0.0394 inch.

Centimeter ( $\frac{1}{100}$  meter) equals 0.3937 inch.

Decimeter ( $\frac{1}{10}$  meter) equals 3.937 inches.

Meter equals 39.37 inches.

Decameter (10 meters) equals 393.7 inches.

Hectometer (100 meters) equals 328 feet 1 inch.

Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inches).

Myriameter (10,000 meters) equals 6.2137 miles.

## Metric surface measures:

Centare (1 square meter) equals 1,550 square inches.

Are (100 square meters) equals 119.6 square yards.

Hectare (10,000 square meters) equals 2.471 acres.



## BOOK CLOTH IN FOREIGN COUNTRIES.

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### DEPARTMENT INSTRUCTION.

DEPARTMENT OF STATE,

*Washington, January 24, 1899.*

*To the consular officers of the United States.*

GENTLEMEN: The Department has been requested by the manager of one of the leading cotton mills of Rhode Island to secure, through your good offices, information relative to the manufacture and use of book cloth, used for binding of books, with a view to the introduction of the American articles into the foreign markets.

In his communication to the Department, the manager above mentioned writes:

For years, the manufacture of book cloth was controlled in this country by an English syndicate who manufacture in England, and because of this the export of book cloths from the United States has been prevented, the parent company reserving for itself the markets of the world. Manufacture of book cloth has, however, been started in the United States by others, as well as by the corporation which I represent, and we have a profitable demand for our products at home.

Not long since, our attention was called to a foreign demand for our goods, and we are now negotiating with parties abroad, who have sought us out, and have the prospect of reaching a large foreign trade.

The information desired by the correspondent will readily suggest itself to you, the chief points being the quantities and qualities of cloth consumed, the prices, source of supply, how the trade is conducted, trade terms, etc. Samples of cloth, if the same can be procured without cost or undue trouble, will add materially to consular replies.

You are therefore instructed to make the necessary investigation into the subject, and report thereon to the Department at your earliest convenience. Replies hereto will be published in consular reports.

I am, gentlemen, your obedient servant,

THOS. W. CRIDLER,  
*Third Assistant Secretary.*

## EUROPE.

### AUSTRIA-HUNGARY.

Consul-General Hurst writes from Vienna, April 11, 1899:

Austria-Hungary possesses only one firm manufacturing book cloth, that of Josef Mutz & Soehne, VI. Mollardgasse 33, Vienna. I had a talk with Mr. Mutz, and he told me that only English goods were taken by the trade here, and that the wholesalers who purchase from him represent his wares as being English, thereby finding a much readier sale for them. He manufactures only one quality and sells it at 9.50 florins per piece, or 28 kreuzers per meter, there being 34 meters in a piece. This would be some 37½ yards at \$4, or about 11 cents the yard.

Mr. Mutz turns out annually goods to the amount of 200,000 florins (\$81,200) and employs in his factory both men and women. The wages of the men range from 1.30 to 2 florins per day; of the women, from 80 kreuzers to 1.20 florins. This is equal to from 53 to 80 cents and 33 to 49 cents, respectively.

The entire consumption of book cloth per year is estimated at about 350,000 florins (\$142,100).

The retail prices at which the bookbinders buy the genuine English bookbinders' cloth range from 50 to 90 kreuzers per meter (17 to 32 cents per yard), according to the quality, whether all or only partly linen, the red always being some 4 cents dearer the yard. Traveling salesmen sell to the wholesale dealers, and the trade terms are 3 per cent discount for cash, or four months' credit. The bookbinders go to the wholesale dealers to purchase, and buy in small quantities, even less than a yard at a time.\* The binders are not given credit.

In Vienna, there are in all five wholesale dealers in book cloth, as follows: Sigmund Goldscheider, IX. Kolingasse 13; Franz Kom marek, VI. Gumpendorferstrasse 17; Julius Schilling, III. Adams-gasse 32; A. J. Stadler's Nachfolger, I. Jordangasse 7; Josef Mutz & Soehne, VI. Mollardgasse 33.

The consumption of book cloth is not very large, books being mostly published in paper covers.

The duty on book cloth in Austria-Hungary is 30 florins (\$12.18) per 100 kilograms or 220 pounds.

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Consul Hossfeld, of Trieste, on May 19, 1899, says:

The bookbinding industry is still in its infancy in southern Austria. While there are in this consular district, which comprises an area of some 30,000 square miles, probably no less than 100 bookbinding establishments, their total business amounts to but very little. The work is principally done by hand, and shops where the proprietor

employs help are very scarce outside of Trieste. But few books are printed in this district, and fewer still are bound. Extensive orders are usually sent to Vienna, where the large shops with modern appliances can do the work more promptly and at lower rates. The great majority of the bookbinders in this district are therefore compelled to confine their attention to the rebinding of old books.

It is difficult to estimate correctly the quantities of cloth consumed by the various bookbinding establishments in this district, for there are no statistics whatever relating to the subject. Nor is it an easy matter to obtain any information through private channels. The average resident of Trieste is very reticent in all matters pertaining to his business, especially when he comes in contact with an American. It is still more difficult to obtain information by correspondence in a district like this, where no less than five or six different languages are spoken, and where many a town of 5,000 and over is still without railroad communication. The people of neighboring districts remain strangers to each other, and outside of the commercial centers, epistolary courtesies are rarely asked for and still more rarely extended.

Trieste consumes between 10,000 and 15,000 meters of book cloth per annum, and her consumption of such cloth is probably one-third of that of the entire consular district.

The principal kinds of cloth used by the bookbinders of Trieste are canvas, twill, chagrin, and ticking. By far the greater portion of this material is of the lowest grade, and is bought at from 19 to 30 kreutzers a meter (6.8 to 10.8 cents a yard). Not over 1,500 meters (1,635 yards) of the medium grades, worth 45 kreutzers (18 cents) a meter, and not over 300 meters (327 yards) of the finer grades are consumed in this city annually.

The prices are:

| Description.  | Kreutzers. <sup>1</sup> | United States currency. |
|---|-------------------------|-------------------------|
| English chagrin, 96 to 98 cm. (37.7 to 33.5 inches) wide, sells as follows: |                         | <i>Cents.</i>           |
| All common colors, except red.....per meter (1.09 yards)...                 | 42                      | 17                      |
| Common red.....do.....  | 45                      | 18                      |
| All fine colors, except red.....do.....                                     | 49                      | 19.8                    |
| Fine red.....do.....  | 54                      | 21.9                    |
| Chagrin-twill.....do.....   | 70                      | 28.4                    |
| Austrian chagrin, 96 to 100 cm. (37.7 to 39.3 inches) wide:                 |                         |                         |
| Black, brown, green.....do.....   | 32                      | 12.9                    |
| All other colors, except red.....do.....                                    | 35                      | 14.2                    |
| Red.....do.....   | 39                      | 15.8                    |
| Smooth cotton (green):  |                         |                         |
| B, 75 cm. wide.....do.....  | 19                      | 7.7                     |
| A, 75 cm. wide.....do.....  | 21                      | 8.5                     |
| Bookbinders' twill:   |                         |                         |
| Mollino, ca., 100 cm. (39.3 inches) wide.....do.....                        | 36                      | 14.6                    |
| Mollino, extra, 100 cm. (39.3 inches) wide.....do.....                      | 39                      | 15.8                    |
| D, small stripes, 106 cm. (41.3 inches) wide.....do.....                    | 39                      | 15.8                    |
| C, ca., 106 cm. (41.3 inches) wide.....do.....                              | 42                      | 17                      |
| B, ca., 115 cm. (45.2 inches) wide.....do.....                              | 55                      | 22.3                    |
| A, ca., 117 cm. (46 inches) wide.....do.....                                | 65                      | 26.3                    |
| Extra, 117 cm. (46 inches) wide.....do.....                                 | 69                      | 28                      |
| Ticking:  |                         |                         |
| 117 cm. (46 inches) wide.....do.....  | 65                      | 26.3                    |
| Better grades.....do.....   | 72-77                   | 29.2-31.2               |

<sup>1</sup> Florin = 100 kreutzers = 40.6 cents.

The best grades of chagrin are imported from Great Britain, especially from Manchester. A good medium grade of linen book cloth is shipped from Germany, the Bleicherei Färberei and Appretur-Anstalt of Bamberg, Bavaria, being at present the German source of supply best known in Trieste. These importations are, however, not very important. Hardly 10 per cent of the book cloth consumed in this city is of foreign origin, and in the smaller towns of the interior imported cloth is almost unknown.

Nearly all the Trieste bookbinders buy their supply of cloth, both foreign and domestic, at Vienna. Direct importations are rare. The usual terms are three months' time, or 2 per cent off for cash.

*List of bookbinders in the consular district of Trieste.*

**City of Trieste:**

Giov. Bislach, Androna del Moro 2.  
 Giov. Bonifacio, via Acque 5.  
 Luigi Comer, Piazza Donata 4.  
 Val. Czerwinski, via Trionfo 2.  
 G. Gervasoni, via S. Nicolò 25.  
 Ant. Filliputti, via S. Antonio 3.  
 Carlo Giorgomilla, via Beccherie 6.  
 Carlo Glessich, Corso 41.  
 Enr. Grassi, via Acquedotto 5.  
 Anna Henke, via Stadlon 17.  
 Ces. Horn & Cam. Tolpel, via Farneto 7.  
 Luigi Horn, via S. Nicolò 21.  
 Gius. Legan, via Cavana 10.  
 C. Meneghelli, via Sanità 7.  
 Giov. Mercier, via Cassa di risparmio 6.  
 M. Morpurgo, via Borsa 1.  
 Lod. Pagani, via Mad. del mare 6.  
 N. Perlewitz, via Farneto 40.  
 Carlo Porzia, Corso 47.  
 Virg. Porzia, Piazza Borsa 13.  
 F. Rollinger, via Teatro 2.  
 E. Scabar, via Poste 1.  
 L. Smolari, via Poste 5.  
 Gintio Standler, Pasco S. Giovanni.  
 F. Stokel, via Stadlon 25.  
 W. Strehler, Piazza della Borsa 3.  
 Napoli Tassinì, via Riborgo 5.  
 Agost. Veronesi, via Torrente 32.  
 Anna ved. Zaruba, via Capuano 5.

**Gorizia:**

Leopoldo Leban, via Municipio 5.  
 G. B. Logar, via Scuole 4.  
 Giov. Paternolli, Piazza Grande 20.  
 Cristiano Sauli, Piazzetta 3.  
 Spirid. Skert, via Seminario 12.  
 Tarner eredi, via Seminario 16.

**Cormona:**

Giov. Batta.

**Tolmino:**

And. Vogrie.

**Capodistria:**

Benedetto Louzer.

**Dignano:**

G. Depol.  
 Giovanni Vatta.

**Isola:**

Ed. Minca.

**Sussinpiccolo:**

Antonio Casa Eredi.  
 Romolo Vidulich.

**Paranzo:**

Gaet. Coana.  
 Francesco Schessark.

**Pisino:**

Teodoro Palladin.

**Pola:**

Giov. Cernitz, via dell' Arsenal 7.  
 A. Fischer, via Mercato 15.

**Portole:**

Fr. G. Rinaldi.

**Rovigno:**

Ant. Coana.  
 Nicolò Daveggia.  
 Domenico Santerea.

**Fiume:**

Stef. Dobrovatz, via Governo 2.  
 Luigi Ierouscheg, via Governo 34.  
 Emidio Mohovich, via Clotilde inf. 2.  
 Matteo Pauletich, Corso 6.  
 Ant. Werk, via Municipio 6.

**Zara:**

Ant. Kreymborg.  
 G. B. Pampano.  
 Anselmo Vladovich.

**Ragusa:**

N. Ginbileo.  
 Pretner Tosovid.

**Spalato:**

Pacifico Facchi.  
 Antonio Rossignoli.

**BELGIUM.**

Consul-General Lincoln sends the following from Antwerp, March 30, 1899:

No manufactory of the article named exists in this consular district, nor, as far as I can ascertain, in this country.

The book publishers and binders known to me report that they depend for their supply entirely upon English and German manufacturers, from whom as a rule they order direct as the material is needed.

With regard to the quantities of the substance consumed here, it has been found difficult to obtain trustworthy information. In the statistics published by the minister of finance for the year 1897, the last issued, under the heading "Book Cloth," the following figures are found:

| Description.                    | Quantity.      | Value.     |
|---------------------------------|----------------|------------|
| Smooth cloth and double-milled: |                |            |
| White or printed—               | <i>Pounds.</i> |            |
| Germany.....                    | 6,177          | \$2,504.56 |
| England.....                    | 15,291         | 6,679.15   |
| France.....                     | 15,090         | 5,834.00   |
| Netherlands.....                | 5,064          | 1,429.60   |
| Colored—                        |                |            |
| France.....                     | 3,892          | 799.02     |
| Netherlands.....                | 3,577          | 805.58     |
| Other countries.....            | 1,578          | 483.27     |

It is difficult to state what the ruling prices are, for the reason, as before stated, that the consumers are in the habit of ordering directly from the manufacturers in the countries mentioned.

It has been possible for me, however, to obtain a trade list of one manufacturer in Germany which, I am told, furnishes a very good idea of the prevailing prices. It is, of course, unnecessary for me to state that the price differs according to quality and color. This manufacturer furnishes cloth in rolls of about 44 yards, with a width of about 38 inches, and the price for the first quality varies from 11½ to 13½ cents. For the second quality, 10½ to 12½ cents; and the morocco from 19 to 21 cents per meter, that is, per 39.37 inches. There is still an inferior quality, which is made only in black, somewhat narrower (about 37 inches in width), which sells at about 9 cents the meter.

The above prices are subject to an 8 per cent discount and 2 per cent additional for cash within thirty days.

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Consul Roosevelt writes from Brussels, February 28, 1899:

As far as I have been able to ascertain, no statistics are kept of the quantities of book cloth consumed in this district.

The supply, excepting a small quantity of a cheap grade made on hand looms by the peasants near Alost, Belgium, comes from the Flanders and Brussels.

I am informed by Mr. Rey Ainé, the most important manufacturer and exporter of linen goods in this consular district, that the following is the established method of conducting trade here. Manufacturers sell directly to retail dealers and jobbers, who in turn sell to the bookbinders. Retail dealers usually carry a small stock of standard goods, while jobbers buy according to such orders as they may receive.

Trade terms are cash with 2 per cent discount, and thirty, sixty, and ninety days' credit without discount. I annex price list of book cloth on this market.

*Quality, width, and price of book cloth.*

GRAY.

| Qualities.           | Width in—    |         | Price per meter<br>(39.37 inches). |          |
|----------------------|--------------|---------|------------------------------------|----------|
|                      | Centimeters. | Inches. | Francs.                            | Dollars. |
| Nos. 122-122A.....   | 110          | 43.3    | 0.90                               | 0.173    |
| Nos. 124-124A.....   | 110          | 43.3    | 1.00                               | .193     |
| Nos. 125-125A.....   | 110          | 43.3    | 1.15                               | .221     |
| Nos. 156-156A.....   | 120          | 47.2    | .96                                | .183     |
| Nos. 160-160A.....   | 120          | 47.2    | 1.10                               | .212     |
| Nos. 163-163A.....   | 120          | 47.2    | 1.35                               | .26      |
| Nos. 165-165A.....   | 120          | 47.2    | 1.45                               | .279     |
| Nos. 169-169A.....   | 120          | 47.2    | 1.60                               | .308     |
| Nos. 341-341A.....   | 110          | 43.3    | .91                                | .175     |
| Nos. 341F-341FA..... | 110          | 43.3    | .96                                | .183     |
| Nos. 347-347A.....   | 120          | 47.2    | 1.15                               | .221     |

BLACK.

|              |            |            |      |       |
|--------------|------------|------------|------|-------|
| No. 133..... | 110 to 112 | 43.3 to 44 | 0.67 | 0.129 |
| No. 134..... | 110 to 112 | 43.3 to 44 | .70  | .135  |
| No. 138..... | 110 to 112 | 43.3 to 44 | .72  | .138  |
| No. 143..... | 110 to 112 | 43.3 to 44 | .82  | .158  |
| No. 145..... | 110 to 112 | 43.3 to 44 | .83  | .16   |
| No. 146..... | 110 to 112 | 43.3 to 44 | .85  | .164  |
| No. 150..... | 110 to 112 | 43.3 to 44 | .90  | .173  |

GREEN.

|              |            |            |      |      |
|--------------|------------|------------|------|------|
| No. 138..... | 110 to 112 | 43.3 to 44 | 0.75 | .221 |
| No. 143..... | 110 to 112 | 43.3 to 44 | .85  | .164 |
| No. 145..... | 110 to 112 | 43.3 to 44 | .85  | .164 |
| No. 146..... | 110 to 112 | 43.3 to 44 | .87  | .167 |
| No. 150..... | 110 to 112 | 43.3 to 44 | .92  | .177 |

DENMARK.

Deputy Consul Blom, of Copenhagen, on February 24, 1899, writes: Book cloth is not manufactured in Denmark, but is imported from Great Britain and Germany.

Small lots of American keratol, colored sheepskins, colored split cowhides, for bookbinding purposes, are imported into Denmark, and the business can no doubt be increased.

Importers here are perfectly willing to import their book cloth from the United States if it can compete in price and quality, and especially in delivery. There is a general complaint among Danish merchants that American goods are not delivered within reasonable time.

Bookbinders import from Great Britain embossed bookbinders' cloth, 38 inches, 38 yards per piece, at the following prices: Black, 16s. (\$3.89); common colors, 17s. (\$4.13); extra colors, 19s. 6d. to 22s. (\$4.74 to \$5.35); plain cloth, 1s. 6d. (36 cents) less. These can be had in about 200 different colors and each color in about 50 different pressings.

Fast cloth costs 2s. 6d. (60.8 cents) more per piece; art linen, 9d. (18 cents) per yard; morocco cloth, 10d. to 1s. 1d. (20 to 26 cents) per yard; moles, 6d. to 10d. (12 to 20 cents) according to quality and width; label cloth, 2½d. to 3d. (5 to 6 cents). The goods are generally sold on three months' credit or 2 per cent discount for cash.

The importers here have traveling salesmen in Denmark, Sweden, and Norway, and the imports of foreign articles for bookbinders' use are estimated at about \$50,000 yearly.

Manufacturers should correspond with D. Voigt & Co., 10 Amager-toro, Copenhagen.

The commercial agency of P. V. Fournais & Co., Copenhagen, can, for a small fee, rate any firm in the Kingdom of Denmark.

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### FRANCE.

The following, dated March 2, 1899, has been received from Consul Thackara, of Havre:

While some of the cloth used for bookbinding in France is made in the country itself, the greater portion—in fact, I am informed three-fourths—comes from Germany, Belgium, England, and Switzerland.

The reason of this is that the foreign-made cloth is from 2 to 5 cents a yard cheaper than the home-made article, the difference in price being due, without doubt, to the difference in the cost of labor.

It is impossible to obtain estimates of the quantity of bookbinders' cloth manufactured annually in France; but statistics published by the custom-house show that 227,200 pounds were imported during the first eleven months of 1898. The exports during the same period amounted to 8,800 pounds. The imports, at first sight, appear to be relatively small; but there are few countries in the world where so many books are published in paper covers as in France. In England or the United States the stories of Kipling, the poems of Longfellow, and most other books are published in cloth covers. In France, on the other hand, the novels of Zola and the tales of Alphonse Daudet appear invariably in paper covers.

The cloth in general use in France measures 38.2 yards in length by 1.07 yards in width. The price of the ordinary quality is about 16.4 cents per meter (1 yard 3.37 inches) in large quantities; and 19.3 cents per meter in small quantities. The best quality of cloth sells for 21.2 cents per meter in large quantities, and 25.09 cents per meter for small quantities.

The French customs duty on book cloth is \$27.02 per 220 pounds for embossed cloth, and \$25.09 per 220 pounds on all other grades.

The freight from New York to Havre by steamers of the *Compagnie Générale Transatlantique* would be from \$8 to \$10 per 40 cubic feet,

according to the quantity shipped. Manufacturers in the United States can, accordingly, by adding freight and duty to the cost price, see at once whether or not they can compete in the French market with the English, Germans, Belgians, and Swiss.

Trade terms: Ninety days' time, or 3 per cent discount for payment at the expiration of thirty days from date of delivery.

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Consul Skinner, of Marseilles, on February 21, 1899, says:

There are no manufacturers of book cloths in Marseilles, and the local consumption of goods of this description is not greatly in excess of local requirements. The most important publishing and binding firm in the city uses a total of 5,000 meters<sup>1</sup> per annum of book cloths, and the other concerns in the same line may buy as much more. The total quantity used annually in France is placed at 1,000,000 meters.

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Consul-General Gowdy writes from Paris, April 7, 1899:

No reliable information can be obtained as to the amount of material consumed here in this industry, as, in addition to the large bookbinding establishments there are many binders working in a small way, in shops as well as at their private residences.

As a rule, the book cloth comes from England, and the prices on the French market are: For a piece of 30 to 35 meters (32 to 38 yards) long by 98 to 100 centimeters (38.58 to 39.37 inches) wide, wholesale, 85 centimes (16 cents) the meter (1 yard 3.37 inches); retail, 1 franc (19.3 cents).

For the fine qualities, for a piece of the above-mentioned dimensions: Wholesale, 1.15 francs (22.1 cents) the meter; retail, 1.30 francs (25 cents) the meter.

The trade terms vary according to the importance of the house, but are generally thirty or sixty days, 2 per cent off for cash.

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## GERMANY.

Consul-General Mason, of Berlin, April 26, 1899, reports as follows:

Bookbinders' cloth, as used in Germany, is mainly of domestic manufacture, although a considerable quantity of the better grades is still imported from England.

Bookbinders who have been consulted state that German and English book cloth are equally good in quality. The English book cloth

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<sup>1</sup> 1 meter equals 1 yd. 3.37 inches.

is brighter in color, but the German product is smoother, and consequently somewhat easier to work with.

Book cloth is manufactured by Messrs. Schaller & Langheinreich at Bamberg, Bavaria; by the Rheinische Kaliko Fabrik, C. Bockhaker, at Gummersbach on Rhine, in the consular district of Cologne, and by two firms at Leipzig, which city is the mart and center of book printing and manufacture in Germany.

Prices of German book calico range from 15 to 30 marks (\$3.57 to \$7.14) per piece of 34 meters (37.47 yards).

No report on this subject would be complete without some reference to pegamoid, the new material made of cotton and certain patented coating, in imitation of embossed leather, which is now coming into extensive use as a material for bookbindings of the higher grades, such as have been hitherto usually done in leather.

Pegamoid is an English invention, but it is now manufactured in several continental countries, the German factory being located at Crefeld, in the lower Rhine district.

Consul Pitcairn, of Hamburg, under date of March 1, 1899, says that there is no book cloth manufactured in his consular district, but he has ascertained that Alfred Jennes, of Gummersbach, on the Rhine, is a manufacturer of this article. Nearly all the book cloth used in Germany, he adds, is imported from England.

#### GREECE.

Consul McGinley writes from Athens, April 10, 1899:

Greece manufactures no book cloth, and therefore imports all she consumes. It is only of recent years that any quantity of book cloth worth mentioning has been used in Greece, and even now the amount is not large. Its use is steadily on the increase, however, and besides that consumed in bookbinding, quite a quantity is now employed by local shoe manufacturers as shoe lining.

From 1,300 to 1,700 packages, each containing 35 yards, have been annually imported by Athens and Piræus during the last few years. There are no available statistics to show what quantities, if any, are imported by the remainder of the kingdom.

Two qualities of book cloth are used here, and are known to the local trade as "simple" and "sagré." The "simple" quality sells here at from 70 leptas to 1 drachma a "peak," or 1 to 1.30 drachmas (12.9 to 16.7 cents) a yard. The "sagré" sells at from 60 to 80 leptas (7.7 to 10.3 cents) a "peak," or 80 leptas to 1 drachma (10.3 to 12.9 cents) a

yard. (There are 100 leptas in a drachma, and the paper drachma being far below par, 7.75 drachmas equaling one dollar at the present rate of exchange.)

These qualities are imported from Germany. Small quantities of book cloth have been imported from England and France, but did not give satisfaction, the English cloth being too poor in quality and the French too high-priced to suit Greek consumers, thus leaving Germany a monopoly of the book cloth trade. This trade is not conducted on a cash system in Greece, the terms being three to six months' time.

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### ITALY.

The following, dated March 15, 1899, has been received from Acting Consul Masi, of Leghorn:

No book cloth is manufactured in this consular district, but the quantity consumed is relatively large.

The qualities generally used are of English, German, Austrian, Swiss, and Italian origin, the latter being made at Monza, Province of Milan, Signor Paolo Meda di B<sup>do</sup> having a monopoly in the manufacture of this article in the Kingdom of Italy.

The price per piece of 34 meters (37 yards) is 24 lire (\$4.63), regardless of color. The width of the book cloth is about 1 meter.

So far as the foreign supply of this article is concerned, the trade is conducted through agents having their headquarters at Rome and Milan. The home industry is conducted direct with the manufacturer at Monza.

The terms are sales at three months' time, or 2 per cent discount for cash payments.

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Consul McElrath, of Turin, on March 7, 1899, sends the following:

The only factory in Italy where book cloth is produced is situated at Monza, in the vicinity of Milan. The book cloth used in Turin is procured from Manchester, Leipzig, and Monza. That of English manufacture is esteemed the best, next comes the German, and the Italian last. English book cloth costs in Manchester from 17 to 25 shillings (\$4.14 to \$6.08) per piece of 36 meters (39 yards). The German article sells at nearly the same price. The Italian Government levies an import duty of about \$10 per 100 pounds upon all book cloth imported into the Kingdom. The Italian book cloth costs about \$5 per piece of 35 yards.

This business in Turin is conducted by three principal houses, which purchase direct from the factories, and then sell in small quantities to the bookbinders, usually at three or four months' time. It is estimated that \$9,000 or \$10,000 worth of book cloth is used each year in Turin.

## NETHERLANDS.

Consul Corey, of Amsterdam, on February 7, 1899, says:

The English manufacturers of book cloth control the market here. For about sixty years Germany also has manufactured the article, and although the quality is at present better than previously, it still does not equal the English. There is only one small factory in the Netherlands, and the quality of its book cloth can not compare with the English.

The prices of the English cloth are higher than the German. England sells at fixed prices; Germany, at almost any price.

The English manufacturers dispose of their goods in Holland through wholesale dealers; Germany, either by agents or direct.

Terms of sale are free delivery here at three months' time, without discount.

The prices of book cloths here are: German black cloth, black and common colors, 10.50 florins (\$4.22) to 11.75 florins (\$4.72) per roll of 34 meters (37 yards 6½ inches) length; width, nearly 1 meter (39.37 inches). Extra colors, 13 florins (\$5.22) to 13.75 florins (\$5.53).

English black and common colors, 11 florins (\$4.42) to 12.75 florins (\$5.12). Extra colors, 13.60 florins (\$5.46) to 15 florins (\$6.03).

The Dutch quality being inferior, no price quotations are given.

The English manufacturers have a much larger assortment of colors than the German.

It is to be recommended that dealings here be transacted either through a wholesale merchant (prominent firms being J. Beuns & Son, Warmoesstrant, 148, and G. Gompén, Damrak, 88) or directly with the bookbinder, the leading firm being J. Brandt & Son, Kusland, 36, Amsterdam.

Under date of May 9, 1899, Consul Listoe writes from Rotterdam: Book cloth is imported from Germany and England. There are no statistics showing the quantities so imported, nor official figures relating to the consumption of the article.

The principal importer of my consular district, who imports the German article, is of the opinion that the entrances for consumption at the present time amount to but a few thousand pieces annually; he also thinks that if American book cloth, of as good a quality as the article used here but a little lower in price were sent, a fair business could be done.

The pieces of book cloth sold here are as a rule 1 meter (1.09 yards) wide and 34 meters (37 yards) long. The dealers buy full pieces, but the bookbinders often want to buy various colors by the yard. The black is most in demand. Grains are chosen according to taste, of late coarse grains having been principally applied for.

Terms for payment are, as a rule, three months without discount, but small dealers or binders buy also from dealers at a year's time. The duty on book cloth in the Netherlands is 5 per cent of the value.

Prices are: Prime quality, 9 guilders or \$3.60 per piece for black. Export quality (chiefly sold in this market), 8.25 guilders or \$3.30 per piece for black. Second quality, 7.75 guilders or \$3.10, in black only. Other colors cost a little more.

### RUSSIA.

Consul-General Holloway writes from St. Petersburg, February 28, 1899:

A large amount of book cloth is used in Russia. It is estimated that 50,000 bolts, 39 yards by 1 $\frac{1}{4}$ , are used in this city each year. One firm uses \$15,450 worth per annum.

Prices per bolt are: Dark colors, \$9.27; light and middling colors, \$10.56; green and dark blue, \$11.38.

There is but one factory in Russia, viz, at Lodz, whose goods are of a low grade. The duty on book cloth is \$22.35 per ton, and the import very small.

### SWEDEN.

Consul Bergh writes from Gothenburg, May 3, 1899:

Book cloth is imported into Sweden from England, Germany, Denmark, and the Netherlands. According to official statistics, the quantity and value of the book cloth imported into Sweden during the year 1897, were:

| Countries.                       | Quantity. | Value.   |
|----------------------------------|-----------|----------|
| From England ..... pounds..      | 29,057    | \$24,726 |
| From Denmark .....do....         | 11,600    | 9,871    |
| From Germany .....do....         | 4,460     | 3,795    |
| From the Netherlands .....do.... | 646       | 550      |
| Total .....do....                | 45,763    | \$38,942 |

Some of the cloth which appears in the above table as imported from Denmark was, without doubt, of English or German manufacture. I am informed that many articles of trade are distributed from the free port at Copenhagen.

The prices of dyed English book cloth vary from \$3.99 to \$5.79 (par exchange) per piece of 36 yards, 36 inches wide, exclusive of freight and duty. I understand that the difference in price depends on the color, the ordinary dark shades being the cheapest; next come the navy

and olive kind, and then red, which is the most expensive. The cloth is chiefly imported from England, but cheaper and inferior qualities are offered from Germany.

The price of label cloth is about  $3\frac{1}{4}$  pence (6.5 cents) per yard.

The import duty on dyed book cloth is 50 öre per kilogram (6.02 cents per pound), and the duty on label cloth is 90 öre per kilogram (10.94 cents per pound).

The most prominent publishers or users of book cloth in this country are in Stockholm, the capital. The largest users of the article in this consular district reside in the city of Lund, in the southern part of the country. I send herewith the names and addresses of certain bookbinders and printers in this consular district.

*Importers or users of book cloth, southern Sweden.*

N. J. Gumperts Pappershandel, Gothenburg, Sweden.  
 Meyer & Köster, Gothenburg, Sweden.  
 Gustaf Mellin, Gothenburg, Sweden.  
 Otto von Schoultz' Bokbinderi, Gothenburg, Sweden.  
 Göteborgs Lithografiska Aktiebolag, Gothenburg, Sweden.  
 D. F. Bonniers Boktryckeri-Aktiebolag, Gothenburg, Sweden.  
 A. Lindgren & Söner, Boktryckare, Gothenburg, Sweden.  
 H. L. Bolinder, Boktryckare, Gothenburg, Sweden.  
 Wald. Zachrisson, Boktryckare, Gothenburg, Sweden.  
 A. B. Petersons Pappershandel, Gothenburg, Sweden.  
 Nordmark & Co., Gothenburg, Sweden.

Skånska Lithografiska Aktiebolaget, Malmö, Sweden.  
 E. Celander, Bokbindare, Malmö, Sweden.  
 N. Grönvall, Bokbindare, Malmö, Sweden.  
 Fritz Holmberg, Bokbindare, Malmö, Sweden.  
 E. Fougstedt, Bokbindare, Helsingborg, Sweden.  
 C. G. Hansson, Helsingborg, Sweden.  
 Aug. Löfmark, Bokbindare, Helsingborg, Sweden.  
 W. E. Wessman, Bokbindare, Helsingborg, Sweden.  
 Christain Bulows Boktryckeri, Lund, Sweden.  
 N. F. Carlströms Boktryckeri, Lund, Sweden.  
 E. Malmström, Boktryckare, Lund, Sweden.  
 Håkan Olsson, Boktryckare, Lund, Sweden.  
 M. Rahms Nya Boktryckeri, Lund, Sweden.  
 Carl Berggren, Bokbindare, Lund, Sweden.  
 Berlingska Boktryckeri- och Stilgjuteri-Aktiebolaget, Lund, Sweden.  
 (And others.)

## NORWAY.

Consul Bordewich, of Christiania, under date of March 23, 1899, says:

The imports into Norway of common black bookbinders' cotton cloth were, according to official statistics, 6,900 kilograms (15,211 lbs.), valued at \$4,500, in the year 1897. In these figures are not included the many other kinds of cloth, such as moleskin and others, which are used for bookbinding, of which large quantities are imported. The trade in all of these goods is so far controlled by Germany and England. The common black cloth for bookbinders is free of duty in Norway. Moleskin is subject to a duty of 11 cents per kilogram (2.2 pounds). Colored cotton cloths, glazed and made for the use of bookbinders, would be admitted free of duty. Books are largely bound and finished in embossed and surface-coated paper of different colors, mostly imported from Germany. I believe there is an excellent opening in this market for American book cloths, and in order to test the matter,

I would advise manufacturers to correspond with the following Christiania dealers in bookbinders' articles: Jens Aanesen, Mollergaden 3, Christiania; E. C. Gjstvang, Prindsens Gade 22, Christiania; A. Gulowsen, Ovre Slatsgade 4, Christiania; Hittusen & Jensen, Shippergaden 26, Christiania; Halvarsen & Larsen, Karl Johans Gade 3, Christiania; Johs Monsen, Kongens Gade 9, Christiania.

Samples might be sent and correspondence invited. They are all large dealers. One of them should be secured as representative in Norway and prices agreed upon with him.

Considering the small population of this country, a large number of books are published, and I believe it would pay to open trade with a firm here.

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Under date of March 6, 1899, Consul Nelson, of Bergen, writes:

Book cloth is not used to any great extent in this district, books for the most part being imported from Germany. The small quantity of cloth used here comes from the same country.

The trade terms in Scandinavia are nearly all from sixty to ninety days' credit, and in order to do any business here, merchants must be willing to allow that length of time to reliable parties.

Bookbinders and dealers in book cloth in Bergen are: F. Beyer, Ed. B. Giertsen, and Yohan N. Nielsens Eftflgr.

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### SWITZERLAND.

Consul Frankenthal writes from Berne, April 25, 1899:

The use of book cloth in Switzerland is limited to local binderies, as this country exports very few bound books. No book cloth is manufactured here; consequently the amount of the import shows the volume of the trade, which in 1898 was valued at \$24,935.60. The following table, showing the sources of the import of this article, has been obtained from official statistics:

| Import from—  | Quintals. | Value.      |
|---------------|-----------|-------------|
| England ..... | 198       | \$12,664.66 |
| Germany ..... | 141       | 9,252.42    |
| France .....  | 87        | 2,427.94    |
| Italy .....   | 9         | 590.58      |
| Total .....   | 380       | 24,935.60   |

England takes the lead in this line here as well as everywhere else. The prices quoted are, for goods 38 to 39 inches wide, in pieces of from 36 to 38 yards:

Quality Ia, 65 to 75 centimes (12.5 to 14.4 cents) per meter.

Quality IIa, same width, from 85 to 90 centimes (16.4 to 17.3 cents) per meter.

Quality IIIa, 35 to 36 inches wide, in pieces of from 75 to 80 yards, 1 franc (19.3 cents) per meter.

German goods, width 1 meter and 20 centimeters ( $47\frac{1}{4}$  inches), sell at 80 to 85 pfennigs (19 to 20.2 cents) per meter.

French black cloth, 1 meter wide, sells at 1.20 francs (23.1 cents) per meter.

Trade conditions are three months' time, or 2 to 3 per cent discount for cash within ten days.

The duty is 30 francs, or \$5.79, per quintal, or 220.46 pounds, gross weight.

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Consul-General DuBois, of St. Gall, under date of February 18, 1899, writes:

No book cloth is manufactured in this consular district. Very little is consumed, this coming from Germany and England. The places in those countries from which book cloth is imported into Switzerland are Cologne, Bamberg, Goeppingen, Leipzig, and Gummersbach, Germany; and London, Manchester, and Birmingham, England.

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#### UNITED KINGDOM.

Consul Boyle writes from Liverpool, March 9, 1899:

There are no manufacturers of book cloth in the Liverpool consular district, neither is this district a center for bookbinding or book publishing. The trade, what little there is of it, is supplied with book cloth from Manchester. There are no statistics available here from which the quantities of cloth consumed in this district can be ascertained.

The prices are from 12s. 6d. (\$3.04) to 18s. (\$4.38) per roll of 36 yards.

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Consul Metcalf, of Newcastle-on-Tyne, under date of March 11, 1899, says:

I have made careful inquiries, and find that there are only two firms in the United Kingdom making book cloth, namely, The Winterbottom Book Cloth Company, Limited, registered office 12 Newton Street, Piccadilly, Manchester; and The Albion Book Cloth Company, Albion Mills, Pendleton, Manchester.

There are some large bookbindery establishments in the north of England, and I have not the slightest doubt that there is a market for American book cloth here if quality and prices are satisfactory.

Prices range from 14s. to 21s. (\$3.41 to \$5.11) for 36 yards, 36 inches in width, and vary according to quality and color.

Consul Touvelle, of Belfast, under date of April 28, 1899, sends the following:

There is no book cloth whatever manufactured in this consular district, and it is impossible to obtain from any official source the amount used. From careful estimates made by those engaged in the trade, it is believed that from \$6,000 to \$7,500 worth of this product is consumed per annum.

The qualities mostly used are the medium grades, i. e., those selling for about \$4.13 per piece. Pieces vary in width from 36 to 38 inches and in length from 36 to 38 yards.

All of the book cloth used in this consular district comes from Manchester, England; at least, such is the report to me by those engaged in the business.

A credit is given of ninety days, and a discount of 5 to 7½ per cent is allowed for cash or payment at the end of each quarter, all goods being delivered.

*Wholesale prices.*

[36 to 38 inch embossed bookbinders' cloth, 36 to 38 yards in piece.]

| Common colors:         |         | Colors—Continued.       |         |
|------------------------|---------|-------------------------|---------|
| Nos. 200–265 .....     | \$4. 19 | 36, dove .....          | \$5. 16 |
| Light colors:          |         | 38, lavender .....      | 5. 16   |
| 270–281 .....          | 4. 19   | 38½, lavender .....     | 5. 16   |
| 282–295 .....          | 4. 31   | 39, saddle .....        | 5. 16   |
| Colors:                |         | 39½, new fawn .....     | 5. 16   |
| 6, pd. black .....     | 5. 16   | 41, pd. brown .....     | 5. 16   |
| 8, sage green .....    | 5. 16   | 42, pd. brown .....     | 5. 16   |
| 8½, pd. brown .....    | 5. 16   | 42½, pd. brown .....    | 5. 16   |
| 9, pd. brown .....     | 5. 16   | 47½, stone .....        | 5. 16   |
| 10, pd. brown .....    | 5. 16   | 51, fawn .....          | 5. 16   |
| 12, slate .....        | 5. 16   | 53, brown .....         | 5. 16   |
| 12½, slate .....       | 5. 16   | 67, terra cotta .....   | 5. 16   |
| 14, buff .....         | 5. 16   | 76, gray green .....    | 5. 16   |
| 21, mahogany .....     | 5. 16   | 109, pale blue .....    | 5. 16   |
| 21½, mahogany .....    | 5. 16   | 110, blue .....         | 5. 16   |
| 23, gray .....         | 5. 16   | 112, lavender .....     | 5. 16   |
| 24, sea green .....    | 5. 16   | 114, light blue .....   | 5. 16   |
| 25, olive .....        | 5. 16   | 116, dead gold .....    | 5. 16   |
| 25½, olive .....       | 5. 16   | 118, dead gold .....    | 5. 16   |
| 30, pd. brown .....    | 5. 16   | 119½, olive brown ..... | 5. 16   |
| 31, gray green .....   | 5. 16   | 123, brown .....        | 5. 16   |
| 31½, sage drab .....   | 5. 16   | 125, dark brown .....   | 5. 16   |
| 32, sage drab .....    | 5. 16   | 127, olive .....        | 5. 16   |
| 32½, red brown .....   | 5. 16   | 149, pale blue .....    | 5. 16   |
| 33, olive brown .....  | 5. 16   | 150, pale blue .....    | 5. 16   |
| 33½, olive brown ..... | 5. 16   | 162, pale green .....   | 5. 16   |
| 34, golden brown ..... | 5. 16   | 164, red brown .....    | 5. 16   |
| 34½, old gold .....    | 5. 16   | 165, red blue .....     | 5. 16   |
| 35, fawn .....         | 5. 16   | 167, slate .....        | 5. 16   |
| 35½, fawn .....        | 5. 16   | 180, orange .....       | 5. 16   |

*Wholesale prices—Continued.*

## Colors—Continued.

|                         |         |
|-------------------------|---------|
| 183, drab.....          | \$5. 16 |
| 194, dark brown.....    | 5. 16   |
| 199, fawn.....          | 5. 16   |
| 20, light sage.....     | 4. 92   |
| 20½, dark sage.....     | 4. 92   |
| 130, light sage.....    | 4. 92   |
| 13, Russian red.....    | 5. 40   |
| 17, pd. green.....      | 5. 40   |
| 17½, apple green.....   | 5. 40   |
| 18, pd. green.....      | 5. 40   |
| 19, pd. green.....      | 5. 40   |
| 37, pd. green.....      | 5. 40   |
| 37½, drake.....         | 5. 40   |
| 40, pd. green.....      | 5. 40   |
| 40½, pea green.....     | 5. 40   |
| 69, riseda green.....   | 5. 40   |
| 141, riseda green.....  | 5. 40   |
| 147, green.....         | 5. 40   |
| 196½, dark green.....   | 5. 40   |
| 198, apple green.....   | 5. 40   |
| 4, ultra blue.....      | 5. 52   |
| 4½, ultra blue.....     | 5. 52   |
| 5, ultra blue.....      | 5. 52   |
| 22, ultra blue.....     | 5. 52   |
| 28, peacock blue.....   | 5. 52   |
| 28½, blue.....          | 5. 52   |
| 43, sky blue.....       | 5. 52   |
| 43½, electric blue..... | 5. 52   |
| 46½, blue.....          | 5. 52   |
| 68, Saxony blue.....    | 5. 52   |
| 111, ultra blue.....    | 5. 52   |
| 150½, ultra blue.....   | 5. 52   |
| 151, new blue.....      | 5. 52   |
| 174½, dark blue.....    | 5. 52   |

## Colors—Continued.

|  |         |
|--|---------|
| 195, strawberry.....                                   | \$5. 52 |
| 16, dark maroon.....                                   | 6. 01   |
| 16½, light maroon.....                                 | 6. 01   |
| 26, mauve.....   | 6. 01   |
| 187, mauve.....  | 6. 01   |
| 2½, best red.....                                      | 6. 74   |
| 3, bright red.....                                     | 6. 19   |
| 11, bright red.....                                    | 5. 46   |
| 113, new red.....                                      | 5. 10   |
| 1½, corallin.....                                      | 5. 46   |
| 11½, etruscan red.....                                 | 5. 46   |
| 45½, new rose.....                                     | 5. 46   |
| 105, scarlet.....                                      | 6. 07   |
| 188, dark blue.....                                    | 6. 13   |
| Gold.....  | 7. 90   |
| Silver.....  | 8. 51   |
| Metallic, 800-811.....                                 | 7. 29   |
| Shot, 850-858.....                                     | 6. 80   |
| Patent paper, lined, 300-328..                         | 4. 19   |
| Patent paper, brocaded, per<br>yard.....               | .28     |
| Plain (or not embossed), less<br>in all colors by..... | .38     |
| Marble cloths:   |         |
| 700, paper lined.....                                  | 5. 59   |
| 710, paper lined.....                                  | 6. 07   |
| 720, paper lined.....                                  | 7. 59   |
| 721, paper lined.....                                  | 7. 59   |
| 730, paper lined.....                                  | 7. 59   |
| 731, paper lined.....                                  | 7. 59   |
| 750, paper lined.....                                  | 6. 44   |
| 751, paper lined.....                                  | 6. 44   |
| 752, paper lined.....                                  | 6. 44   |

Consul Swiney, of Cork, on February 16, 1899, reports that he has made inquiries in the matter, and finds that no book cloth is manufactured in Ireland, and, as far as he can learn, its manufacture in England is practically confined to an amalgamation called "The Winterbottom Book Cloth Company, Limited," Manchester.

The following has been received from Consul Fleming, dated Edinburgh, February 21, 1899:

Book printing is an important industry in Edinburgh. Perhaps it is the natural inference that bookbinding should be correspondingly

important, but is not so. Many of the books "machined" (as the term goes) in this city are bound and published elsewhere. Several prominent publishing houses in London have practically all of their printing done here. The printed sheets are shipped to London and are bound and issued there. These books from Edinburgh presses and London publishers represent the entire range of literature, including fiction, history, biography, travel, philosophy, and theology. A member of one of the great printing companies informs me that from one-third to one-half of the volumes printed in Edinburgh are bound in London. Nevertheless, this city is the center of the bookbinding industry in Scotland. There are 46 bookbinderries in Midlothian (the county of Edinburgh). Eight or ten of these binderries have the bulk of the business. Of outstanding prominence are William Hunter & Sons, Orrock & Son, and Thomas Nelson & Sons, the last-named firm being publishers who bind, as well as print, their own books. It is well known to the trade in Scotland that the firm using the largest quantity and the greatest variety of book cloth in Edinburgh is William Hunter & Sons. Some years ago, book cloth was made by Thomas Nelson & Sons for their own use. They did not undertake to supply the trade. A little experience in this branch of production convinced them that it would be economical to purchase the article from the establishments devoted specially to that line of manufacture. No book cloth is now produced in Scotland. The entire supply comes from Manchester. Up to a recent date, the Winterbottom Book Cloth Company, Limited, had a complete monopoly of the trade in the United Kingdom, and I am told that the competition of new concerns at Manchester has not yet materially reduced the volume of business of the Winterbottom Company, although prices and profits have been affected.

The value of book cloth consumed annually in Edinburgh is estimated at \$100,000. The cheaper and the higher grades are used in about equal proportions; that is, the total value of the common grade of cloth consumed in a year is about equal to the total value of the extra grade of cloth consumed in the same time. Each of the two general grades comprise many varieties or styles. The common cloth, plain, ranges in price from \$2.30 to \$3.25 a roll (36 yards in length and from 36 to 40 inches wide). The common embossed cloth is from \$2.65 to \$4 a roll. The extra cloth, plain, ranges from \$4.35 to \$5.65. The extra embossed cloth is from \$4.68 to \$6. The average price of the extra grade in use in Edinburgh bookbinderries is not far from \$4.86. During the past three years, there has been a marked reduction of the prices of book cloth, both common and extra. Cloth that now sells for \$2.30 was \$4 three years ago. Prices are still tending downward, owing, chiefly, to the competition among Manchester manufacturers. Book cloth of extra quality, plain, was recently reduced by one firm to \$4.

The trade is conducted here altogether through agents. The Win-

terbottom Company and the other manufacturers have agents in this part of Scotland who sell on commission. The terms of sale are six months' credit and 5 per cent discount. The terms were once three months and 5 per cent, but the longer credit has gradually been established.

Whether American-made book cloth can find a market here depends mainly on quality, design, and price. It would encounter no prejudice in Edinburgh. I am of opinion, however, that a considerable share of the trade could be secured only by the personal efforts of a representative of the manufacturers.

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Consul Higgins writes from Dundee, March 6, 1899:

Owing, probably, to the absence of any large firm of book publishers in this consular district, there are no houses of consequence whose business is entirely that of bookbinding. The quantity of book cloth consumed is therefore comparatively small, and from the fact that there is no wholesale dealer in the city, it may be judged that the trade done is insignificant. The principal outlet is through the manufacturing stationers; that is, those who make business books, notebooks, and such like.

From inquiries I have made, I learn that the manufacture of this article is confined chiefly to the midlands of England, and more particularly to Manchester, where there are several concerns engaged in the industry. Nearly all of these firms some years ago combined to form a syndicate, which is known as the Winterbottom Book Cloth Company, Limited, and has by far the largest business of any similar concern in the country. It has an agency in Glasgow, from which travelers go round the country and sell to consumers from sample. Scottish orders are supplied either from Manchester or Glasgow, usually the latter, when the order is given direct and immediate delivery is required, but as the company pays all cost of carriage, the price to the consumer is the same.

This cloth sells at from 14s. 3d. (\$3.46) per roll of 38 yards, measuring 36 to 38 inches wide, for "common" colors, to £1 2s. (\$5.34) according to color. The goods of the Albion Book Cloth and Tracing Cloth Company, Limited, Pendleton, Manchester, do not equal in quality those of the syndicate, but are considerably cheaper and suit certain purposes—box making, for instance—quite as well as the more expensive article. The cost is 13s. 3d. (\$3.16). These prices are subject to 5 per cent discount, but I have not been able to learn with certainty the period of credit. Some firms pay the traveler on his call for the order given on his previous visit, some take six months' credit, and some pay on receipt of monthly statement. Probably in opening new accounts, however, the terms would be stated at 5 per cent for cash in three months.

Consul Taylor, of Glasgow, on March 14, 1899, says:

No authoritative information can be obtained from this district touching the manufacture of book cloth. The cloth used here is all supplied from Manchester. There are no manufacturers of the article in this district, nor, indeed, in Scotland. The principal makers in England formed a "trust" four or five years ago, which is now called The Winterbottom Book Cloth Company.

There are quite a number of firms here engaged in the binding of books, and these vary in size from the class employing only 1 or 2 hands to the large firms, employing about 350. Of the latter there are two, and they are both publishing houses which do their own binding, besides binding for other people. There is no machinery employed, all work being done by hand. The cloth, which is supplied in rolls of usually 38 inches wide and 36 yards long, is first cut to the required size. It is then laid out on the bench at which the operator is working and with a brush smeared over with glue. Three pieces of pasteboard, two of equal size to suit the sides and one in the center, the thickness of the book, are then laid on top. These are pressed lightly on the cloth and the cloth turned neatly over the edges of the pasteboard. This is all that takes place, so far as the fixing of the cloth is concerned. The covers are afterwards taken to another department, where they are titled, etc. After this is done the book is glued to the covers. It is then put into a hydraulic press, and after a little while is taken out, ready for sale. The cloths are of varying shades, and there is an endless variety, probably 100 different shades and qualities. Prices are subject to a trade discount of  $7\frac{1}{2}$  per cent on quarterly settlements. I am only able to give a rough estimate of the quantity used here, as those engaged in the business are not disposed to furnish information as to actual figures, but I believe the figures given are pretty near the mark. From information gathered, the estimate is 15,000 rolls 38 inches wide and 36 yards long. This represents 540,000 yards of the width stated. The average cost is probably \$3.89 per roll, which shows a total of \$58,350.

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## AMERICA.

### DOMINION OF CANADA.

Consul-General Bittinger writes from Montreal, February 16, 1899:

The book cloth used in Canada is now and has always been purchased in England, for the reason that the English article is regarded as far superior in quality to the American product. Dealers here declare that it would be more convenient to purchase in the United States, and they would prefer to do so were the quality and price of

American manufactures the same as the English, especially as they could order by wire and receive the goods in two or three days, while it requires a month to get orders filled from England. The principal book-publishing houses are in Toronto.

The Montreal binders declare that no American book cloth has been offered in this market for years.

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Consul Henry, of Quebec, on February 7, 1899, writes:

I have visited all the bookbinderries in this city, and from the best information I can get I should say that on an average 325 rolls of bookbinders' cloth are used here per year.

As to quality, I could tell only according to price, which ranged all the way from \$2.75 to \$6 per roll. Some dealers claimed they could not get the fine colors in the United States, and had to pay from \$4 to \$6 for the English. Most of the dealers buy in Montreal and Toronto, 5 per cent off for cash, thirty days, or four months. I found only one party that bought direct from manufacturers in the United States, but some thought the cloth used here came from the United States through Montreal and Toronto dealers. I found only one firm that imported from England.

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Consul Myers, of St. John, New Brunswick, on February 3, 1899, says:

There are three bookbinderries in this district, all located at St. John, viz: Barnes & Co., 84 Prince William street; Richard Heans, 109 Prince William street; J. & A. McMillan, 100 Prince William street. They use about 200 rolls annually, about one-third being of the first and two-thirds of the second quality. Prices for best are \$5.25 and for second, \$4 per roll. They are supplied through importers at Montreal, who obtain the Winterbottom cloth from England. Terms are thirty days.

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Consul-General Foster, of Halifax, Nova Scotia, under date of February 9, 1899, writes:

There are only four binderries in this province, all of them located in Halifax. The total annual consumption amounts to about 400 rolls, costing, approximately, \$2,000. So far as I am able to learn, it is all purchased in Manchester, England. Samples are sent here, and from these the binders select and order the quality and quantity of cloth desired. Different patterns of the same grade and color are all the same price, the variation in prices in same grade of cloth being on

account of color, the finer colors, like fine reds, etc., being more expensive than the common shades. The grades of cloth used here cost from 13s. 6d. to 22s. (\$3.28 to \$5.35) a roll. The rolls are 36 to 38 yards long and 36 to 38 inches wide. The list selling price is subject to a trade discount of  $7\frac{1}{2}$  per cent and a cash discount of  $1\frac{1}{2}$  per cent.

Bookbinders' cloth is admitted into Canada free of duty.

During the (fiscal) year 1897, imports of book cloth into Canada amounted to the value of \$23,686, of which total \$2,491 was imported from the United States and the balance from Great Britain. More than two-thirds of the entire consumption of that year was in the province of Ontario alone.

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Consul Graham, of Winnipeg, Manitoba, under date of February 20, 1899, writes:

The bookbinding industry has attained comparatively small proportions in this consular district. It is, however, a growing industry, the volume of business done in this line having doubled within the last two or three years.

There are four small binderies now in operation in the city of Winnipeg, and some binding is done in connection with stationery and publishing houses in Brandon, Regina, Calgary, Edmonton, Prince Albert, Port Arthur, and perhaps other cities of the district.

The book cloth used is almost entirely of the cheaper grades. A very limited quantity of a better quality is used.

The whole amount of book cloth consumed in this district this year will aggregate 300 to 350 rolls of 36-inch cloth, running 36 yards to the roll. The entire supply is imported from England, and is furnished the trade here through wholesale houses in Montreal. Prices range from \$4 to \$5 per roll, plus freight charges from Montreal.

All the firms with whom I have talked seem anxious to try United States cloth, and are ready to give orders if prices compare favorably with those now paid for English cloth. I can see no reason why American manufacturers should not supply the trade here.

Conditions in British Columbia are described in a report from Consul Smith, of Victoria, dated March 10, 1899, as follows:

There are only four book binderies in this consular district, all located in Victoria. The volume of business is not large, almost all the edition work done on Vancouver Island being for the provincial government. As nearly as can be ascertained, the value of all the book cloth used in Victoria binderies does not amount to \$500 per annum, and the quantity does not exceed 50 rolls. This is bought at prices ranging from \$4.50 per roll for common grades to \$9 per roll for extra, the proportion of the higher grade used being very

small. The cloth is mainly purchased in Canada, though a small portion is procured from United States houses. Preference is given to the goods of British manufacture, and it is believed that nearly all the cloth used here, whether bought in Canada or the United States, comes originally from England, except the cheaper grades, which are American and are regarded as quite inferior. Some orders are sent by mail, though commercial travelers bring samples of cloths semiannually and purchases are made through them. The terms of trade from Canadian dealers are four months, or 5 per cent off for cash in thirty days. American dealers give ninety days' credit.

### NEWFOUNDLAND.

Under date of July 31, 1899, Consul Carter writes from St. Johns.

There is no book cloth manufactured in this consular district. Messrs. Dicks & Co., of St. Johns, are the only bookbinders in the colony. The managers of this firm inform me they use about 40 rolls a year, of a grade that costs from \$6 to \$7. Most of this is purchased in New York, where equally as good an article can be secured as in the English market and upon equal terms.

### MEXICO.

Consul-General Barlow writes from Mexico City, February 25, 1899:

The largest portion of book cloth comes from Germany. Some comes from France and a little from England.

The importations for the fiscal year ended June 30, 1898, were:

| Period.                | Kilo-grams. | Value.  |
|------------------------|-------------|---------|
| First six months.....  | 5,508       | \$1,895 |
| Second six months..... | 5,322       | 5,035   |
| Total.....             | 10,830      | 6,930   |

The principal dealers are Drogueria Belga, Manuel Mendez, and G. Lohse & Co. Some consumers import for their own use, but do not sell.

The goods are imported in rolls of 38 meters (41.5 yards); width, 38 inches.

The terms given by German sellers are six months, and longer if desired.

Black and brown are the colors chiefly used.

The import duty is 10 cents<sup>1</sup> and 12½ per cent. The kilogram is the standard for figuring the duty.

<sup>1</sup> Mexican, 4.7 cents U. S. currency, taking the valuation of the peso, April 1, 1900, by the U. S. Director of Mint.

Hauling from railroad station to warehouse averages 50 cents (Mexican) per case.

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Consul Canada, of Vera Cruz, under date of April 28, 1899, says:

After diligent investigation, I find the trade in book cloth of very small importance. It is used in limited quantities, dealers buying only amounts necessary for immediate needs. All that is used here is purchased in the City of Mexico. Whatever terms may be granted are the same as in all lines of business in Mexico—six and nine months.

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#### GUATEMALA.

Consul-General Beaupré writes from Guatemala, March 10, 1899:

There is really no market for book cloth in this country, not more than 300 yards being consumed in the course of a year. This is largely due to the fact that no publishing is done here, because the customs duties are very high on all kinds of paper, while books or pamphlets are admitted duty free, all of which I explained in my recent report on paper.<sup>1</sup> Book cloth, then, is used only for blank books and for binding archives or documents. All of it now comes from Germany, where a roll of 36 yards costs \$4.93. Some linen cloth is used, especially when any particularly good work is to be done, for in this humid climate cotton cloth spots and discolors.

Under existing conditions, there is no market here for the American article.

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#### WEST INDIES.

##### JAMAICA.

The following, dated March 3, 1899, has been received from Consul Dent, of Kingston:

There is no market here worth considering in the line of book cloth. Some little is used by the government bindery, by the Gleaner Newspaper Company, and by one other firm, but the whole would amount to very few rolls in a year. It is brought from England.

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##### HAITI.

Consul-General Terres, of Port au Prince, on March 22, 1899, says:

A very small quantity of book cloth is used here. I am informed by the principal bookbinder of this city that not more than one

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<sup>1</sup>See Special Consular Reports No. —.

volume in ten is bound in cloth, marbled paper being generally used. He told me that he imported 100 meters a little over a year ago and has only used about 3 meters.

Imports come from France on account of the low price at which it can be obtained there, 22 cents per meter, all colors being the same price.

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#### SANTO DOMINGO (DOMINICAN REPUBLIC).

Consul-General Maxwell, of Santo Domingo, on April 17, 1899, reports that book cloth is not used there in any appreciable quantity, if at all.

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#### ARGENTINE REPUBLIC.

Consul Mayer writes from Buenos Ayres, March 17, 1899:

In the year 1898, the importation of book cloth was 96,652 kilos (213,078 lbs.), valued at \$116,012 gold, a decrease of 25,812 kilos, valued at \$25,532 gold, from the figures given for 1897. This was due to an overloaded stock of the year previous.

English, German, and French manufacturers have a regular stock of their cloth here. They sell at ninety days from date of invoice.

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#### BRAZIL.

Consul-General Seeger transmits from Rio de Janeiro, January 9, 1899, copy of a letter from a local publisher, as follows:

A very small quantity, comparatively speaking, of book cloth is consumed in this country, the greater part of the books published here being bound in paper. The reasons are (1) cheapness; (2) insect enemies. Cloth-bound books are subject to the ravages of a large kind of cockroach, called *barata*, which destroys the binding by eating the paste or starch which the cloth may contain.

There are no statistics available of the quantity imported, but it is not large.

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#### CHILE.

Consul Caples writes from Valparaiso, October 26, 1899:

I regret to say that I have not yet been able to obtain any reliable information in regard to the book-cloth trade, owing principally to the fact that the book cloth imported into this country is all classified as general cloth, in the Bureau of Commercial Statistics of Chile. It is, therefore, almost impossible to ascertain with accuracy the quantity and value of the book cloth imported into or consumed in this consular district.

## PARAGUAY.

Consul Ruffin writes from Asuncion, March 24, 1899:

The trade in book cloth is not very extensive, there being only about two bookbinders here; the most important is a German firm—H. Craus y Cia.

The quality principally used is very ordinary, as the demand for fine cloth to cover books is rare. The colors most employed are chocolate, or brown, also red. The amount imported for 1898 was 4,000 kilos (8,818 lbs.), valued at \$1,000 gold. It comes almost entirely from Germany, and enters free of duty.

It is very difficult to obtain the prices here. Ordinary book cloth is sold at retail for about 30 cents gold a meter (1 yard 3.37 inches).

Credits of six months are usually allowed.

## URUGUAY.

Consul Swalm, of Montevideo, under date of March 7, 1899, says:

The book cloth used here comes almost exclusively from Germany and England, but the amount is comparatively small, not exceeding in import value \$8,000. It is not reported in the customs returns separately from other "cotton cloth manufactures." For customs purposes, it is valued at 43 cents to the pound, upon which the duty is 51 per cent.

The book-binding work is very limited, there being but few books printed in the Republic, and the binding being largely in paper. Public documents are seldom bound in cloth, save in small numbers for higher official use.

The German import houses keep full stocks of the material and grant about as much time on the account as the local buyer wants, provided his record as a debt payer is good.

The German manufacturer grants the importer as much as six months at 6 per cent, or even better terms. In fact, good houses can have their own time for paying the manufacturer, and the interest never exceeds 7 per cent on the account. In addition, Germans pay strict attention to the requirements of the trade in regard to packing, etc., and do all that they can to popularize the product.

## VENEZUELA.

Consul Plumacher sends from Maracaibo, March 9, 1899, a statement that he has inquired among large commercial houses and does not find book cloth on the market. There are bookbinders, but they work only on a small scale. The owner of the largest establishment tells Mr. Plumacher that there is hardly any demand for book cloth.

## ASIA.

### BRITISH INDIA.

Consul-General Patterson writes from Calcutta, March 29, 1899:

India is not a book-making country, as the large masses of the people are uneducated and have no use for books, and but few books, comparatively, are published here.

The government has its own printing and binding establishments, where all books issued by its various departments are printed and bound, and naturally the book cloth would be bought in England, even though lower prices were offered from other countries.

There are small publishers of books who do general work, and they buy their book cloth in London.

Besides these, many of the large mercantile houses have native duffries (bookbinders) to do their work, who buy their book cloth in the bazaars.

The largest consignments of book cloths are in rolls of 39 yards each averaging from 15 to 20 shillings (\$3.65 to \$4.87); the cheaper quality is generally used.

I doubt if there is sufficient demand for the cloth here to warrant the belief that a paying business from the United States could be done.

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### CHINA.

Consul-General Goodnow reports from Shanghai, March 9, 1899, that the printing and binding of books for that market is done almost altogether in Japan.

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### JAPAN.

The following has been received from Consul-General Gowey, of Yokohama, under date of March 29, 1899:

It is impossible to give the qualities of cloth consumed and the countries from whence it is imported, the amount being so small that the returns of the foreign trade of Japan give only the quantity and price. For the year 1898, there was imported into this country from all sources 575,664 yards of bookbinder's cloth, valued at \$47,442, gold.

The trade here is almost wholly in the hands of local American or European houses. The American Trading Company, a United States corporation doing business at this port, is, I understand, by far the largest importer of book cloth in Japan. I learn that its importations are principally from Manchester and London, England. The

managers state that they would much prefer doing business with an American concern, but have been unable to do so on account of prices. The home office of this company is at No. 100 William Street, New York City, and it is probable that information as to the introduction of American cloth might be obtained by correspondence with them.

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### KOREA.

Consul-General Allen writes from Seoul, March 11, 1899, that foreign bookbinding is in its extreme infancy in Korea, and the very small amount of book cloth imported at present comes from Japan and is probably of English manufacture.

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### PERSIA.

Vice-Consul-General Tyler writes from Teheran, May 10, 1899:

It is only within a very few years that book cloth has been used in Persia, and even now its employment is limited. The consumption in Teheran amounts to about a dozen rolls, of 35 yards each, a year; and this would probably be the average for any other city of similar size. The reasons for this small demand are various.

For some centuries past, the trade of the bookbinder has been intimately associated with the art of the painter, whose work always reaches its highest degree of excellence in miniature. In perspective and in the technicalities of art, the Persian painter is woefully deficient; but in the blending of colors, delicacies of details, and smoothness of surface, a compensating tone is added to his work. It is therefore in book covers, small looking-glass cases, caskets, and pen boxes that he is seen to best advantage; and in the delineation of flowers, birds, and butterflies he exhibits the best examples of his skill.

The general excellence and beauty of finish of many of the old and some of the comparatively modern illuminated manuscripts of the works of the more famous poets and philosophers, are deservedly admired. It was, and still continues to be, the ambition of painters and bookbinders to provide a covering conformable and suitable to the exquisite workmanship within. In this respect, the Persian artist and workman manifest a refined sense of the unity of different branches of art. These and other considerations have made the trade of book-binding an important factor in the art industries of the country.

Three or four hundred years ago, and even later still, a curious and most durable binding was made from some kind of pulp, with a peculiar raised or embossed florid ornamentation, generally colored with gold and lazuli. The style was chaste and fascinating, shows the highest development of the Persian bookbinder's craft, and when new must have been a most attractive ornament. The processes by

which this style and quality were made are now unknown; and even foreign ingenuity and research have hitherto failed to discover the secrets of its production. Examples of this kind are now very rare and costly.

The hand-painted covers of the present day, at their best, are very beautiful, but in richness and mellowness of coloring and delicacy of outline are scarcely equal to the old examples. The finer specimens are traded for fabulous sums.

Since lithography has to a great extent replaced manuscript, and brought even classical works within the reach of most who are able to read them, a less ornate and more serviceable binding has become necessary. Leather and morocco coverings, which are cheap in Persia, in red, green, and blue for the boards, are those most ordinarily used. Marbled paper boards, with leather backs and corners, cover the lighter and cheaper kinds of books.

If cloth bindings can be made sufficiently strong and durable to resist rough usage, and ornamental enough to be attractive, there is reason to believe that a considerable trade in book cloth may be projected.

Hitherto, the supply has been of English manufacture, although for the Teheran market it has been imported from Vienna.

In width, the cloth is about 46 inches, and the quality is rather indifferent. It is sold wholesale by the merchant at 20 cents per zar (41 inches). It costs, in Vienna, about half that sum.

When imported by foreigners, a customs duty of 5 per cent ad valorem is paid at the port of entry, and a free pass is then given to any part of the country.

Goods are traded generally throughout Persia on a long-credit system, with the option by the purchaser of discounting his own bills after a certain date agreed upon by the parties.

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#### SYRIA.

Consul Ravndal, of Beirut, on February 27, 1899, says:

A considerable amount of book cloth is used in Syria, one concern alone (the American Mission Press) having bound 20,000 books during January and February of this year. I think an estimate of 1,000 rolls per year for the port of Beirut will come near the truth. Ordinary rolls consist of 38 yards, 36 to 38 inches wide.

The qualities in demand are the cheapest, there being few binders that buy the better grades.

A great quantity comes from Manchester in the form of "fencings" (manufacturers' offcuts and waste), and is done up in rolls, the pieces ranging in length from one-half to 1½ yards. These sell in large quantities at from 12 to 18 cents per pound, according to quality and length of pieces. Book cloth is also imported from France and Germany.

Many of the local commission agents deal in this article. There is no warehouse for book cloth especially in Syria. The merchants who deal in Manchester goods generally bring in the "fencings" and send word to all likely purchasers when they receive a consignment. Some binders buy direct from England, France, or Germany.

Very few if any pay cash on delivery. All purchasers in Syria get a long credit (three to six months).

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## AUSTRALASIA.

### VICTORIA.

Consul-General Bray writes from Melbourne, April 18, 1899:

No cloth used in the binding of books is manufactured in the colony of Victoria, the whole of the supply being drawn from the United Kingdom.

The amount consumed in the colony is estimated roughly at 1,000 rolls, of 36 yards each, per annum.

Prices range from \$3.52 to \$5.40. Ten per cent discount is granted for cash.

Manufacturers in the United States should communicate with the following firms and furnish samples with full information as to prices, etc.: G. Busbridge & Co., 430 Bourke street, Melbourne; A. Cowan & Sons, Limited, Little Flinders street, Melbourne; W. Detmold, Limited, Little Flinders street, Melbourne; Edgerton & Moore, Little Flinders street, Melbourne; Gordon & Gotch, Limited, 126 Queen street, Melbourne; G. Robertson & Co., 384 Little Collins street, Melbourne; Sands & McDougall, Limited, 365 Collins street, Melbourne; James Spicer & Sons, 315 Flinders Lane, Melbourne.

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### NEW ZEALAND.

Consul Dillingham sends the following from Auckland, May 27, 1899:

After giving the subject much study and a thorough investigation, I find that no book cloth is made in the colony, although it is used in a moderate way for bookbinding. A small quantity is imported from the United States, but most of it comes from England. The New Zealand Government returns do not give any information on the subject, nor have I found it possible to glean much data from the printers and bookbinders re the quality or quantity imported, or prices paid. The trade terms vary, but the usual ones are sight draft against bill of lading, or draft at sixty days. If the manager of the mills referred to in Department's instruction will furnish this consulate with samples of his cloth, together with prices, discounts, etc., I am of opinion that his goods can be introduced in Auckland and throughout the colony.

# MARKET FOR READY-MADE CLOTHING IN LATIN AMERICA.

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## DEPARTMENT INSTRUCTION.

DEPARTMENT OF STATE,  
*Washington, April 20, 1899.*

*To the consular officers of the United States in Latin America.*

GENTLEMEN: A leading firm of clothiers in Chicago has requested the Department to secure through your good offices information concerning ready-made clothing in Latin-American countries, with a view of enlarging the trade in American clothing in those markets.

As the subject is one which concerns the wholesale clothiers of the United States, the Department has acceded to the request of the Chicago firm, and you are hereby instructed to institute the necessary inquiries into the conditions which govern the clothing trade in your respective districts and report the result at your earliest convenience.

It is not possible in this instruction to indicate all the points embraced in the scope of the inquiry. These points, however, will readily suggest themselves to you in the course of the preparation of your replies hereto. The leading suggestions offered by the Chicago firm are as follows: The sizes, class, quality, quantity, and prices of ready-made clothing consumed in your respective consular districts; whence and under what conditions the goods are imported; facilities and cost of transportation from the countries of production as compared with facilities and cost of transportation from the United States; tariff imposed upon ready-made clothing; the means to be employed for the introduction of American clothing into your several districts; names of responsible dealers in ready-made clothing who would be likely to handle American goods; the class of people who consume ready-made clothing, their tastes, and what American clothiers would have to do to conform to such tastes, etc.

The American clothing trade has made such vast progress in recent years that, after supplying the immense home demands, it is now in a position to enter more extensively into foreign markets; and, as much of the success of this prospective expansion will depend upon the replies to this instruction—which replies will be printed in Consular Reports—the importance of supplying accurate and comprehensive information to the industry concerned will, the Department feels assured, be fully appreciated by you.

I am, gentlemen, your obedient servant,

THOS. W. CRIDLER,  
*Third Assistant Secretary.*

## MEXICO.

### ACAPULCO.

No ready-made clothing is handled here. The leading merchants inform me that on several occasions, they have endeavored to handle it and it proved a losing venture. Those who have clothes made to order wear trousers of light-weight French or German cassimere (mostly German, as I am informed they are the cheapest). Vests are seldom worn, and coats are of alpaca, or of some other light-weight goods. What we term full suits are rarely worn; mixed or broken suits prevail. The working class always wear suits of a coarse grade of white cotton domestic, made for that special purpose, consisting of a shirt and a pair of trousers only. It is too hot here to wear heavy goods. I will not enter into details regarding sizes, styles, tastes, etc., as I believe ready-made clothing can not be handled here with any degree of success.

GEORGE W. DICKINSON, *Consul*.

ACAPULCO, *June 3, 1899.*

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### CHIHUAHUA.

The finer woolen cloths for clothing consumed in this district come principally from Europe and are made up here to measure or at the factories.

The coarser woolen cloths are made here and manufactured into clothing in this district. The cotton cloth is made and manufactured into clothing here, except denims and ducks, which come from the United States and are made into clothing here. Very little, if any, ready-made clothing from the United States is sold in this district.

Clothing for this market should be, I think, about one size smaller and a grade cheaper than that sold in the United States. As Chihuahua is only 240 miles from the boundary of the United States and has direct railroad communication with our country and with Tampico and other Mexican ports on the Gulf of Mexico, facilities of transportation should be cheaper than from Europe, but merchants here complain of high railroad rates from the United States. Merchants here tell me that they can not handle our clothing because of the duty and because of cheap material and cheap labor in Mexico, and that in the finer cloths, it can not compete with the products of the cheap labor of Europe. Ketelsen & Degetan and Bernard Bucher are among responsible dealers in clothing in Chihuahua.

As regards the cutting, weight, tailoring, trimming, and packing of clothing to suit the Mexican market—and what is more important, to meet the various and changing requirements of the Mexican custom-house laws and regulations—I must say that only an experienced clothing merchant and an expert custom-house broker could give proper detailed directions, and I advise those seeking markets in this country to employ some competent gentleman who speaks Spanish to thoroughly investigate and report upon these matters. It is not the work of a day, but of weeks and months.

In a general way, I can state that the average duty on ready-made clothing would amount to at least 75 per cent of the value of the importation, the finest goods paying the lowest and the coarsest goods the highest duty, there being many different rates, according to weight and quality.

I do not consider the field an inviting one.

W. W. MILLS, *Consul.*

CHIHUAHUA, *May 1, 1899.*

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#### CIUDAD JUAREZ.

The Mexican people are rapidly adopting American fashions in clothing. They are wearing shoes, hats, and clothes patterned after prevailing styles in the United States. These articles, when made in America, are all of recognized superiority when compared with similar productions of other countries. While American styles of ready-made clothing are popular, and are copied, our manufacturers are practically excluded from the Mexican market on account of an almost prohibitory tariff, levied by the Mexican Government.

The fashions in United States clothes are followed, but the suits are made either from Mexican or European cloth. If some reciprocal arrangement could be entered into between the two Republics, by which our ready-made clothing would be permitted to enter Mexican markets duty free, our manufacturers would reap a rich harvest. As far as European competition is concerned, they would enjoy, under such a plan, almost as great a monopoly in clothing in this country as they now have in machinery and agricultural implements. It would be an enlarging, growing market.

Every year, the condition of the masses in Mexico improves, while there is a corresponding increase in the number of new wants. Even in remote districts the Mexican laborer discards the costume of his ancestor, and prides himself upon his ability to wear shoes, hats, and clothing.

Just as the suspender is taking the place of the banda, and the shoe supplants the guaroche, so also are the coat, vest, and trousers relieving the tight-fitting and spangled chaqueta and pantalones cuar-

tados, which give to the Mexicans that picturesqueness first noted by tourists.

The class of clothing consumed in my consular district is principally cotton. It is almost entirely a product of Mexican looms. The woolen cloths from which the best class of clothes are made are imported from Europe. But the demand is limited. There are not more than two small tailor shops in my consular district.

There are practically no importations at this port of ready-made clothing from the United States. The working classes wear Mexican-made clothing, that costs from \$3 to \$12 per suit Mexican (\$1.42 to \$5.68 gold<sup>1</sup>). How can the American manufacturer compete with the Mexican when the duty on woolen clothing is \$5.50 (\$2.60 gold) per kilo (2½ pounds), and on cotton ready-made clothing \$2.50 (\$1.18 gold) per kilo, Mexican currency? The manufacturers in Mexico have every advantage. In the first place, the cotton fiber is cultivated on the plantations by peon labor; in the mills it is turned into cloth by the same class of cheaply paid employees, and again in the factories it is finished for the market by labor which receives the low rate of wages paid in Mexico. The average suit of clothing will certainly weigh two pounds or more. The Mexican people can not afford to wear a United States suit, when the Mexican product can be purchased complete at the price necessary to be paid in tariff duties alone on the American suit.

Mexico is very well supplied with manufacturing establishments for turning out ready-made clothing. Many of these plants are equipped with the most modern machines. The State of Chihuahua has within its borders 265,000 people—not a great many for a section of about 80,000 square miles. There are three large clothing factories within the city of Chihuahua, the capital, supplying not only all the demands in the State, but in a measure the markets in other States. These factories turn out several millions of dollars worth of clothing annually. About all the clothing consumed in this consular district comes from the city of Chihuahua.

There are woolen mills in Chihuahua which furnish the factories with raw material. The muslin used in the manufacture of clothing is principally produced in Mexico.

The United States sells blue denim in Mexico from which clothing is made, but the sales of this material are limited.

As long as the Republic of Mexico maintains the present tariff rates on ready-made clothing, manufacturers in the United States will be excluded from the Mexican markets.

CHARLES W. KINDRICK, *Consul*.

CIUDAD JUAREZ, June 7, 1899.

<sup>1</sup>The value of the Mexican peso was estimated by the United States Mint, April 1, 1900, at 47.3 cents.

## COATZACOALCOS.

No imported ready-made clothing is used in this district. The laborers in the railroad shops and on the line generally wear pantaloons and blouses made of overall stuff, manufactured and made up in factories in the Republic. The material is very often of a blue color, of a rather poor or inferior quality; the articles are not well put together and do not wear well. The Mexicans of ordinary occupation wear native tailor-made clothing, of material known as drill, which is light in weight, wears well, and is sold at retail for from 37 to 57 cents (17½ cents to 27 cents gold) per yard, an entire suit made up by the native tailors costing from \$7.50 to \$15, Mexican silver (\$3.55 to \$7.10 gold). This drill is imported chiefly from the United States.

The native Indians, who constitute the greater part of the population, wear very few clothes, made up by themselves entirely of unbleached cotton goods manufactured in the Republic.

The import duty on ready-made clothing of cotton, or cotton predominating, is \$2.50 (\$1.18 gold) per kilo; of wool, \$5.50 (\$2.60 gold) per kilo; of wool predominating, but containing silk, \$6 (\$2.84 gold) per kilo.

WALTER K. LINSKOTT, *Consular Agent*.

COATZACOALCOS, *May 5, 1899.*

## LA PAZ.

The prospects for opening a market for ready-made American clothing in this consular district are to all appearances unfavorable at present.

First, the number of residents who could create a demand for such goods is very limited indeed. Further, these people, as a rule, are inclined to wear tailor-made clothes, which they seem to prefer, even though they are more expensive.

Another consideration is the material difference in the import duties between unmade and made-up goods. The duty on ready-made clothes varies from \$3 to \$5.50 (\$1.42 to \$2.60 gold) per kilogram, while woollen cloth pays \$1.75, \$2, and \$2.50 (\$0.83, \$0.95, and \$1.18 gold) per square meter.

As to the cut or fashion, it is generally taken from European plates.

The laboring classes use ready-made overalls of denims, jeans, etc., manufactured in the country, with which it would be difficult to compete when the import duty is considered.

JAS. VIOSCA, *Vice-Consul*.

LA PAZ, *May 8, 1899.*

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## MAZATLAN.

The sizes mostly used here are 34 by 36 for coat and vest and 32 by 32 to 34 by 34 for pants. The class of goods for this market should be of the best grade, as imported ready-made clothing can be sold only to the better classes. Light gray business suits, black coat and vest, with light pants, are usually worn by the business people, but black suits will be most sold in this market, as no person is without one. Professional men and civil officials wear mostly black. The goods should be of light weight, all wool, and coats lined only in front. Black twilled mohair coats, figured marseilles or white pique vests, and crash suits for the hot season would find large and ready sales. Prices of ready-made clothing can not be given, as there is no stock of ready-made clothing kept here, but suits to order of light-weight cashmere sell from \$18 to \$20, gold; alpaca coat, \$8; vest, \$4; pants, \$5. There is no ready-made clothing imported into this district, and cost of transportation from the States would easily amount to 10 per cent. The best method of introducing clothing would be to send a sample lot of the goods described, at the lowest cash prices, to firms mentioned below; also to send samples of the various colors, attached to the garments.

The class of people who use ready-made clothing would be the merchants, professional men, bankers, officials, mine owners, and capitalists. Clothing made to order is about 25 per cent cheaper here than in the States. Labor is very cheap, but good prices can be realized on well-made and good-fitting garments. Gentlemen here dress with care. One of the best reasons why American clothing should find a ready sale is that the tailors do not usually succeed in turning out a good-fitting garment; this is especially the case with pants. Ready-made clothing for the working people can not be imported, as they wear only the very cheapest of cotton goods made up mostly at their own homes. Mazatlan, with its flourishing factories and 16,000 inhabitants, has no ready-made clothing store; neither is there an American store of any sort here. The sale of merchandise, as shown by the sworn statement at the collector's office, amounted to over \$40,000,000 last year, and is rapidly increasing. The losses on account of bad debts are trifling, as Mexico has no exemption law.

Mexico is developing rapidly. A few years ago, she imported almost all the necessities of life. Now, the importations of these articles are reduced to almost a nominal figure, the difference, which amounts to many millions annually, going directly into the pockets of the people, to be spent for articles which some years ago were considered a luxury. I will give one instance: The importation of corn from the States a few years ago amounted to over \$6,000,000. Last year, the official report shows less than \$50,000. Chihuahua has the largest clothing factory in this Republic. The business has so increased that the managers

have ordered this year over \$25,000 worth of machinery and over 100 sewing machines.

The names of responsible dealers who would be likely to handle clothing are:

*Mazatlan, Sinaloa.*—Wohler Barting, Sucesores, J. C. Charpentier & Co., Las Fabricas de Francia, Somellera Hermanos, Torre de Babel, City of Pekin, Nuevo Mundo, Escobar Hermanos, Melchers, Sucesores.

*Culvican, Sinaloa.*—Lug Salmon, Sucesores, Ponciano Almada & Co., Sucesores, Francisco Rodriguez, Manuel Clothier, Severiano Tamayo, Lucano de la Vega, J. de la Vega, Sucesores.

LOUIS KAISER, *Consul.*

MAZATLAN, *May 10, 1899.*

### MEXICO CITY.

I find that the conditions which govern the clothing trade in this district are practically as follows: There is not much ready-made clothing sold, all classes of citizens preferring to have their clothing made by the regular tailors. As to the means to be employed for the introduction of our goods into the several districts, I can suggest but one way, viz, let some reputable firm of clothiers send an active, well-informed agent, who can speak the language, to this city, and let him make a tour of the various stores and learn the prevailing custom. He can readily gain permission to visit the large railroad and other shops, and as I think most of his custom would come from American mechanics, engineers, and conductors of railroad trains, he could interview the men, display his samples and styles, and make sales. The trade would commence with the English-speaking people, and if the right man were sent and the kind and quality of his goods made known, his trade would doubtless increase and sales be made to Mexicans, Spaniards, Germans, and French. A practical study of the desires of the residents must be made and their tastes conformed to, both as to material used and manner of make-up.

As to facilities and cost of transportation and tariff imposed upon ready-made clothing, see my report under date of November 23, 1898.<sup>1</sup>

ANDREW D. BARLOW,  
*Consul-General.*

MEXICO, *June 9, 1899.*

### MONTEREY.

Ready-made clothing is almost unknown in Monterey, there being no establishments of that character, strictly speaking. Clothing is made to order here of light goods imported from England, France, and Germany. Heavy textiles are not suited to this climate, and any

<sup>1</sup> Commercial Relations, 1898, Vol. I.

enterprise of the kind in question would have to use thin materials. The introduction of ready-made clothing here would be an innovation, but I am of opinion that if some energetic firm would undertake it, first sending a competent person to study the field, success would be assured. I can see no good reason for Mexicans importing their materials from Europe, and, in my judgment, it would require only an effort to convince them of this. Mexicans are generally friendly to Americans; they readily adopt our methods and fashions, and should ready-made clothing of the character indicated be introduced, it would probably find a ready and extensive sale here and elsewhere in Mexico.

JOHN K. POLLARD, *Consul-General*.

MONTEREY, *May 17, 1899.*

#### NOGALES.

There is a limited quantity of ready-made clothing imported into Sonora, almost exclusively from France. The sizes are somewhat smaller than in the United States, and the material is very cheap. About two thirds of that imported retails for from \$10 to \$20 silver, (\$4.73 to \$9.56) and one-third for from \$20 to \$30 (\$9.56 to \$14.09). The tariff on wool clothing is \$5.50, and on cotton clothing \$2.50 Mexican per kilo. This is on the "legal" weight, which includes pasteboard box and wrapping paper, in fact, everything except the outside wooden packing case.

The best means of introducing American clothing into Mexico is through competent traveling salesmen, conversant with the Spanish language and the mode of doing business in this country. A full line of samples should be carried, and the salesman should be well posted as to weight of garments, through freight rates, etc, and be able to inform his customer of the exact cost of the merchandise laid down at his place of business. At present, the main point to be considered is the price. Styles and colors are not so important, as customers nearly all belong to the poorer classes, who consider the price before anything else. I think Mexico is a good prospective field for American ready-made clothing, and while at present the cheaper grades would be the only ones salable, a systematic and intelligent attempt to introduce the better grades would meet with ultimate success.

The following are among the principal dealers who would be likely to handle American goods.

Guaymas: Horvilleur & Save, G. Möller y Cia., sucs., H. Wolff, F. Aguilar, sucs., Pedro Cosca y Cia., Garcia, Bringas y Cia.

Hermosillo: Horvilleur y Camon, M. Jamesy Cia., Marburg y Luders, May Hermanos.

Nogales: L. Horvilleur, May Hers., Donnadieu Herms.

J. F. DARNALL, *Consul*.

NOGALES, *May 16, 1899.*

## SAN LUIS POTOSI.

The sale of ready-made clothing in the district of San Luis Potosi is still in its infancy, all of the suits that are sold here being handled by a branch house of a factory in Mexico city, which distributes to several cities of the Republic.

The only stock of ready-made clothing on the market in this city is that owned by M. Franck & Co., of Mexico city. It was duly inspected and found to be as follows: Sizes range from small boys' up to men's size; class, sack suits; quality of the goods, medium, consisting of native Mexican goods, together with woolens and cassimeres from France and England, all poorly made up; quantity, very small, not over 75 suits per annum being sold; prices, men's size, Mexican goods, \$10 to \$25 per suit; French or English goods, \$20 to \$35; boys' size, Mexican, French, and English goods, \$2.25 to \$14. In comparison to the above prices, those of the tailor-made suits are as follows: Men's size, sack suit, Mexican goods, \$15 to \$30; French or English goods, \$35 to \$55; frock coat, \$5 extra.

San Luis Potosi is a city of 60,000 inhabitants, the American colony numbering some 600 souls. A large majority of these consist of road men. They all have their clothes made here by the tailor, and as it takes from two to four weeks from the time an order is given until the suit is completed, it is not satisfactory, because they are continually changing their base of operations and need quick service.

I think if American ready-made clothes could be placed on the market here so as to compete in price with the tailor-made suits, they would find a ready sale, at first mainly to the Americans who have been accustomed to such clothes, and then gradually to the Mexicans.

JOHN H. FARWELL, *Consular Agent*.

SAN LUIS POTOSI, *May 2, 1899.*

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TAMPICO.

The market for ready-made clothing in and near Tampico is at present limited, owing to the long-continued warm weather. Nine-tenths of the population are satisfied with a shirt and trousers for nine months of the year, adding a blanket for the remaining three months. Drill garments of cheap quality are sold in a few sizes, but the trade is small and receives but little attention from the owners of the only store here, where these goods are carried as a side line. The retail price of such suits is \$11 Mexican currency (\$5.20 gold), and the cost delivered here from the factory at Chihuahua is about \$7.50 Mexican currency (\$3.54 gold).

There exists also some demand for blouses and pantaloons of blue jeans, suitable for laborers and machinists, which retail for \$4.25

Mexican currency (\$2.01) per suit, but the material is very thick and coarse. Thinner goods, even at a higher price, would sell better.

The above named, together with ready-made alpaca and silk coats, are all that are offered in the stores of Tampico.

As to the prospect of creating a demand among the remaining tenth of the population, for the ready-made article, I believe it to be uncertain, to say the least. In the interior, where woolen goods can be worn all the year round, a good trade might be opened, but along this coast I very much doubt its success.

People here are never in a hurry, so the ready-made suit does not appeal to them as a time saver.

Tailors make suits to order from English or French worsteds and serges at a cost of \$25 to \$50 Mexican currency (\$11.82 to \$23.65 gold). These are stylishly made and well trimmed.

The taste of the Mexican as to style of cut and pattern of cloth differs from ours, which, together with the native conservatism and dislike of change, would make it necessary for the United States manufacturer of ready-made clothing to thoroughly and personally investigate conditions before embarking in the manufacture of clothing for this market.

There are factories established in Chihuahua and Mexico, which are doing a good business.

SAML. E. MAGILL, *Consul.*

TAMPICO, *May 17, 1899.*

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#### VERA CRUZ.

The conditions with reference to what is ordinarily termed "ready-made clothing" in the United States are, in this consular district, at once novel and interesting.

The primary consideration with which the American manufacturer is confronted is the climate. The mean temperature the year round is 80° F., running to about 86° to 88° in the middle of the day, falling to 65° and 70° during the nights. It will be readily seen that ready-made clothing as ordinarily used in the United States would be quite out of the question here. At the same time, this market is susceptible of development if our manufacturers will adapt themselves to existing conditions.

There are three classes to consider in contemplating the exploitation of this market: First, the workingmen; second, the poorer classes; third, the middle or upper class.

*Workingmen.*—In this class we find various nationalities—American, English, German, and Irish, with the Mexican Indian or peon predominating. With the exception of the latter, I find that the ordinary blue cotton or jean overalls and checked or plain blue jumper (coming

mostly from Germany and France) are in demand and satisfactory; but the Indian or peon, however, does not wear a coat or vest; he wears a white starched shirt, or a fancy colored negligee shirt laced in front with a cord of many colors, with huge colored tassels at the ends. His trousers fit him in every sense of the word, and end in large, old-fashioned spring bottoms. The cloth employed in their manufacture in this consular district is made in the Republic of Mexico, is generally cotton, and is found in patterns of every color. The prices range from \$1.50 to \$3 Mexican silver (about 71 cents to \$1.41 gold).

If the American manufacturer will come here, buy his cloth here, and bring machinery that will enable him to cut out 75 to 100 pairs of trousers at one cutting, he will be able to compete with the natives and will dispose of his product at a good margin of profit.

There would be great possibilities for "job lots." Such things are unknown here, and if pushed by American methods would undoubtedly be profitable to a considerable degree. These trousers must be made of goods that will permit of their being made acquainted with the washtub at least once a week; they must be fast colors and not prints.

*Poorer classes.*—The remarks in the foregoing are practically applicable in this connection. It should be borne in mind that plain, somber-hued clothes have no demand. The goods must be brilliant and many-colored, but cheap.

It is necessary for the manufacturer who desires to obtain a foothold to cater strictly to the demand without reference to his own ideas. Innovations are practically inadmissible, unless it be in favor of striking patterns.

*Middle or upper class.*—Here, individual fancy predominates. The widest latitude is permissible as to color, cut, style, or fit.

French cashmeres, plain, checks, plaids, and stripes, abound; all these must be made to order; none are ready-made. French and English "drills" (wash goods) in colors, checks, and stripes and plaids, which at a short distance resemble cashmeres, are in favor. Alpaca, black, white, gray, drab, finds a ready market, most of the latter being ready-made. As a rule, all other clothing must be made to order.

A good cashmere suit will cost from \$40 to \$60 Mexican silver (about \$19 to \$28 gold). The "drill" suit costs from \$12 to \$30 Mexican silver (about \$5.70 to \$14 gold).

The sizes that it would be necessary to handle in a ready-made stock are what are known in the United States as the "talls and slims," the "shorts and stouts," and the "medium slims," the latter being in the majority.

The facilities and cost of transportation from the United States compare favorably with those from any other country. The cost of transportation is readily obtained at the New York City offices of the

Mexican National Railway, the Mexican Central Railway, and from the New York and Cuba Mail Steamship Company, only straight tariff rates being quoted in Mexico on account of various existing "pool agreements," to which all common carriers in the Republic of Mexico have become parties.

The duties imposed on ready-made clothing, when there is any silk employed in its manufacture (and this is interpreted to mean thread in sewing), are \$3 Mexican silver (about \$1.41 gold) per kilo legal weight.

The names of merchants who would be likely to become interested in the handling of ready-made clothing in this consular district are as follows: C. Benito & Co., Julio Aragon & Co., Zalda Hermanos & Co., Gustavo Struck & Co.

In my opinion, the best plan to promote the sale of American ready-made clothing in this district would be to establish one or two large distributing centers, say, in the City of Mexico, San Luis Potosi, or Chihuahua. The establishment would be compelled to carry a very complete line of all kinds, as what is demanded on the Gulf coast is entirely different from what is required in the interior, where the climate is more temperate and oftentimes quite cold; and still other qualities are in demand on the Pacific coast and in the mining districts.

It has been my aim in this report to deal strictly with present conditions in the consular district of Vera Cruz. If competent persons, understanding the people, the language, and the trade would take the matter in hand in the interests of our manufacturers, there is no reason why the United States should not control this trade as against all other nations.

WM. W. CANADA, *Consul*.

VERA CRUZ, *May 2, 1899.*

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## BRITISH HONDURAS.

The conditions and outlook for this industry can not be called encouraging, for the imports are small and the market limited. The population of the colony is about 33,000, and it is a safe estimate that 70 per cent are of the laboring class of native blacks and creoles. While most of their clothing is ready made, it is of the cheapest and lightest grade; coats being seldom worn, and vests almost unknown. About all the woollen clothing worn is tailor made, and I find the most expensive suits retailing for \$12. The favorite business dress is a coat and trousers of linen, duck, khaki, or jeans. The coat is cut high (close) at the neck, and is worn generally over an undershirt. The trousers are wide, the vest is discarded, making a costume not at all "natty," but certainly most cool and convenient. The whole suit is

of a pattern I have never seen worn in the United States, and which our manufacturers, as far as I know, do not supply. I can not find that any appreciable amount of ready-made clothing is imported from the United States, England at present being the cheapest market, and the great majority of the merchants favoring English styles and English material. Where suits made to order are so very cheap, fine grades of ready-made goods are not in the market. When manufacturers in the United States enter these tropical countries more largely, as they undoubtedly will, our trade should extend, for nowhere in the world is better clothing made than in America.

As the customs heading of clothing includes every garment worn by man, excepting shoes and hats, the actual amount of ready-made clothing we send here can not be given, but under the general head, the imports for 1898 were:

|                           |           |
|---------------------------|-----------|
| From United Kingdom ..... | \$28, 744 |
| From United States .....  | 6, 131    |
| From France .....         | 260       |
| From Germany .....        | 3, 901    |

New Orleans, Mobile, and New York houses send commercial travelers here regularly, and gradually, perhaps, the ready-made clothing trade will increase, but only in the cheaper lines, for tailors' charges are most reasonable and the material good. If the strong desire for English styles can be overcome, the United States will control the entire trade in the low-priced and moderate-priced suitings.

W. L. AVERY, *Consul.*

BELIZE, *May 18, 1899.*

## COSTA RICA.

The ready-made clothing trade in Costa Rica is not extensive. Twenty-five thousand dollars in gold would probably cover the extent of the business in this line. Almost, if not quite, all the imported ready-made clothing comes from Germany, England, and France. The cheaper kinds of clothing, such as are worn by the common people of the country, the peons, are made in Costa Rica from a coarse, mixed imported cloth. A suit of this kind, which consists usually of a blouse, or jacket, and pants, costs from \$5 to \$10 in gold. The finer grades of ready-made clothing are imported already made up. Suits of this kind cost from \$20 to \$30, gold.

Freight rates from Hamburg are 30 shillings, or about \$7.50, and from New York \$8, a slight difference in favor of Hamburg. Customs duties in Costa Rica are collected by weight. Below are rates per kilogram (about 2½ pounds) on the different kinds of cloth. Rates are given in Costa Rican currency and gold equivalents at present

rates of exchange, which rates are, however, subject to slight variations from time to time.

| Description.   | Costa Rican currency. | Gold equivalent. |
|--|-----------------------|------------------|
| Clothing, ready made:  |                       |                  |
| Cotton, not knit.....  | \$1.09                | \$0.22           |
| Cotton, knit.....  | .65                   | .22              |
| Linen of whatever kind and shape.....  | 2.17                  | .75              |
| Wool, though lining and trimming be of other material.....   | 2.17                  | .75              |
| Silk, though lining and trimming be of other material.....   | 4.35                  | 1.51             |
| Cloths of silk of all kinds, though they employ, in part, other materials not otherwise specified..... | 3.26                  | 1.13             |
| Cloths of wool, in pieces or patterns, pure or mixed.....  | 1.09                  | .38              |

A trade in American ready-made clothing might be gradually built up, if the dealers in the United States would send out skilled cutters to study the styles popular with the people and then export cloth in pieces, as the duties on cloth in pieces or patterns are considerably less than those levied on clothing already made up. This plan would have the additional advantage of enabling dealers to take immediate advantage of any change in styles.

The leading dealers in San Jose are: Robert Hermanos, Herrero Hermanos, Uribe y Batalla.

JOHN C. CALDWELL, *Consul.*

SAN JOSE, *September 16, 1899.*

## HONDURAS.

All merchants of this place carry a limited stock of ready-made clothing, imported from New Orleans and Mobile. This is steadily increasing through the frequent visits of commercial representatives. It is impossible to give sizes, class, and quality, as the population consists of a mixture of several nationalities. All sizes, classes, and qualities are required to suit their tastes and fancies. The present style of American clothing is satisfactory. No very expensive articles are used here. Men's suits cost from \$6 to \$25, United States currency, and youths' and children's suits from \$2 to \$10, United States currency. All clothing used in this section of the country is imported from the United States at thirty to ninety days' credit.

Bales and packages should be waterproof, as often they are landed through the surf. The import duties are specific. Each bale or package should contain only one class of material, for if otherwise, the import duty will be computed and collected on the entire weight of the package at the rate for the highest class it contains.

The tariff imposed on men's ready-made clothing of linen, wool, or cotton (class 8) is 30 cents per pound; women's ready-made clothing, cotton (class 7), 24 cents per pound; women's ready-made clothing,

linen or mixed with cotton (class 9), 50 cents per pound; silk suits for both sexes, not specified (class 11), \$1.50 per pound; shirts, cotton (class 7), 24 cents per pound; shirts, linen, or cotton mixed with linen (class 8), 30, cents per pound; shirts, woolen or mixed with cotton (class 10), 80 cents per pound; shirts, woolen mixed with cotton or with silk embroidery (class 11), \$1.50 per pound; undershirts, cotton, embroidered (class 8) 30 cents per pound; women's undershirts, lawn, fine cambric, knitted, linen tarlatan muslin, linen, or tissue of similar kind (class 11), \$1.50 per pound. In addition to the above duties, there is charged half a cent per pound bond-house fee, and 56 per cent on the duty; all duties are collected on gross weight.

The principal merchants in this district who deal in clothing are D. Warren, B. W. Baker & Co., W. Badden & Bro., N. Howell, D. Morgan, and R. Woodville & Co.

The best means to be employed for the introduction of United States clothing are for our manufacturers to send out responsible representatives to canvass and exhibit samples of clothing—men who understand and speak Spanish as well as English.

R. WOODVILLE, *Vice-Consul*.

UTILLA, *May 15, 1899.*

## SALVADOR.

The population of Salvador is estimated at 750,000 inhabitants; the people are conservative and do not take kindly to innovations.

Salvador is a thickly settled country, whose wealth is agriculture; more than two-thirds of her population follow that avocation. The farmers' wants in clothing are easily supplied, consisting as they do of a native straw hat, a short shirt of unbleached muslin (in whose make-up  $1\frac{1}{4}$  yards enter, at a cost of 9 cents per yard), a pair of pants, and sometimes sandals of untanned leather.

The cost of the pants and jacket varies according to material and size, as follows:

| Description.             | Pants.            | Jackets.         |
|--------------------------|-------------------|------------------|
| Cotton white drill ..... | \$0.75 to \$1.12½ | \$1.83 to \$2.86 |
| Cotton overalls .....    | 1.75 to 2.25      | 2.37 to 2.75     |
| Cotton jeans .....       | 2.00 to 2.50      | 2.50 to 3.25     |

These are manufactured in the Republic by natives and Chinamen; the goods are of United States origin, as well as the machines.

The balance of the population, constituting that portion that inhabits cities and towns, follows the custom of going to a tailoring establishment and ordering clothes. A very fair suit can be had for \$35

(\$16.55 gold) that could not be duplicated ready-made for less than \$18, United States currency, in the New York or Chicago markets. I had occasion to order an evening dress suit here. It was made of first-class material, and the workmanship was good. I paid \$90 in silver (\$40.57 gold). The same suit would have cost me in the States \$75.

Messrs. Gotlieb & Lewis came to San Salvador in 1892 with a stock of ready-made clothing, bought at reduced prices in New York. The business was not a financial success and was abandoned.

The greatest obstacle is the customs duty on ready-made clothing, which in the bulk pays a duty of \$300 (\$141 gold) per 100 kilos (220 lbs.), while cloth pays \$100 (\$47.30). To this must be added additional imposts for landing, wharfage, warehouse, registration, etc.

The journeyman tailor is paid for piecework and earns from \$8 to \$9 per week, or about \$3.46, United States currency.

The prospects for business are not bright just now, as the country is passing through a crisis caused by speculation and the low price of coffee, and very little money is in circulation.

JOHN JENKINS, *Consul.*

SAN SALVADOR, *August 1, 1899.*

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## ARGENTINA.

The trade in ready-made clothing in Buenos Ayres is increasing every day, and the proportion of custom-made or made-to-measure suits sold is diminishing in proportion.

The reason for this is as follows: First-class cutters, such as are employed in fashionable tailor's shops, command a very high salary. The cassimeres employed for suits made to order are generally English or French, and pay a relatively high duty; hence one has to pay anywhere from \$60 to \$100, paper (\$21 to \$35 gold), for an everyday suit ordered to measure. Several important houses have opened lines of ready-made clothes manufactured wholesale; prices for these goods are from \$25 to \$40, paper (\$8.75 to \$14 gold), per suit, and for children from \$6 to \$20, paper (\$2.10 to \$7 gold) according to the style and finish which is put into the work. The duty on manufactured clothes is very high; men's suits are valued officially at \$15, gold, children's at \$6, and the duty is 50, 10, and 2 per cent on these amounts. Stamped paper, customs charges, etc., bring the net duty to over 65 per cent of valuation, which may be considered prohibitive.

D. MAYER, *Consul.*

BUENOS AYRES, *July 20, 1899.*

## BRAZIL.

After a thorough investigation, I find that ready-made clothing is very little used in this district, and none is imported.

All dry goods stores carry a large stock of worsted, cotton, and linen goods in the piece and in cuts, and sell by the meter or in lengths suitable for suits, coats, vests, or trousers. In many cases, they make the garments to order for a small fee, or the purchaser takes the goods to some tailor.

The little ready-made clothing that is sold is made of the cheap native cotton goods, and is worn by the poorer classes or used for working clothes. Even the greater part of these are made to order, no store attempting to keep more than a couple of dozen suits in stock; these are made here. I can not find any worsteds or woollens made up, the ready-made clothes being confined exclusively to cotton goods.

On account of the cheapness of tailoring, the peculiar cut of the clothes, and the custom of the people of having everything made to order, there could be no market here for our ready-made clothing unless it were possible to revolutionize the present ideas.

H. W. FURNISS, *Consul*.

BAHIA, *July 7, 1899.*

## CHILE.

### ANTOFAGASTA.

This market is entirely supplied from the south. In 1897 some \$75,000 worth was imported, but under the new duty of 60 per cent ad valorem, less has entered, though I can not obtain the exact figures. Suits of cheap cloth are sold here for \$5.50 to \$22. The quality is for working people. People of reasonable means order clothes made, and suits of good cloth can be had for \$45. For nitrate fields and mines, corduroy is generally used. Pants sell at \$1.50 to \$2.50. Some cloth is made in the country, but I understand the greater part used is German and Belgian. Under such conditions, there appears little room for our trade.

C. C. GREENE, *Consul*.

ANTOFAGASTA, *June 3, 1899.*

## IQUIQUE.

The duty on ready-made clothing under the present tariff is 60 per cent ad valorem, or practically prohibitory. From what I have been able to learn after careful inquiry, I can state that importations of

this class of goods into this district have entirely ceased. In this case, native industry is fully protected.

J. W. MERRIAM, *Consul*.

IQUIQUE, *June 17, 1899.*

### VALPARAISO.

The latest commercial statistics published in Chile correspond to 1898, during which year 444 packages of ready-made clothing, valued at \$53,716.68 United States currency, were imported into Valparaiso, as shown by the following table:

|   |               |
|---|---------------|
| Importations from France.....             | \$35, 154. 24 |
| Importations from Great Britain.....      | 13, 034. 51   |
| Importations from Germany.....            | 5, 203. 44    |
| Importations from Belgium.....            | 142. 35       |
| Importations from United States.....      | 100. 00       |
| Importations from Argentine Republic..... | 82. 14        |
| Total.....                                | 53, 716. 68   |

In 1898, a law to protect native industries came into force. This may be considered as prohibiting the entrance into Chile of any considerable quantities of ready-made clothing; in fact, importation of the finished article has considerably decreased. The importation of ready-made clothing into Valparaiso from all countries during the year 1897, as given by the official statistics, amounted to \$131,711.04, thus showing a falling off of \$77,994.36 in 1898. In 1897, the duties were 35 per cent ad valorem upon low valuation, and since January 1, 1898, they have been and now are 60 per cent, levied upon higher valuations than formerly. For instance, in 1897 the highest duties on fine cloth or cassimere pants were \$21.90 per dozen valuation and 35 per cent ad valorem duties, which is the equivalent of paying custom-house duties of \$7.65 net per dozen. Since January 1, 1898, the highest duties on fine cloth or cassimere pants are \$58.40 per dozen valuation and 60 per cent ad valorem, which is the equivalent of paying net custom-house duties of \$35 per dozen pairs. Difference, \$27.35 per dozen.

All ready-made clothing is more or less in the same situation. There are two large private factories—one in Santiago (the capital) and one in Valparaiso. They are called “talleres militares” (military workshops), and make military and other clothing. Each employs from 500 to 600 women, and both are owned by Carlos Eduardo Justiniano & Co. I may mention that in past years, the clothing worn by the bulk of the poor and middle class adult Chileans has been made in France, while that worn by children was mostly made in Germany. The British exported to Chile good material, but badly and clumsily cut clothing, and so appear second on the list of countries exporting

to Chile. There are scarcely any imports of clothing from the United States, but I am informed that some years ago several trials were made by American dealers, all of which proved unsuccessful, as French clothing was more tastefully gotten up and cheaper, and German-made clothing was much cheaper than American or British. If, however, our manufacturers wish to make a trial, I should recommend them to cut each suit and fold it up separately, with lining, stiffening, buttons, and thread or silk just sufficient for the suit in question, and not to put one single stitch into the work. The clothes can be made up here. The suits will be valued according to quality, and an ad valorem duty of 60 per cent will be assessed, but as there will be no stitches in the material, a reduction of 40 per cent of the 60 per cent will be allowed. Of course, seamstresses and sewing men would have to be employed to sew, press, and finish after arrival here. Sizes are more or less the same as those ruling in the United States. Any man earning from \$16 to \$65 per month will order his suits to be measured and made up for him, and not buy ready-made clothing. Custom-house duties on cloth and cassimere are moderate. Cloth is cut and work done by expert tailors. Cutters are French, German, and Chileans. Suits of well-cut and well-made material range in price from \$13 to \$26. (All of the above amounts are in United States currency.)

The country is now overstocked with countless varieties of English, French, German, and Belgian cloths and cassimeres, fine and coarse, and in no nation populated by white people is labor so cheap as in Chile. Chileans are expert sewers, both men and women being skilled. The principal dealers in ready-made clothing in Valparaiso are Simon & Co. (Casa Francesa) and H. Chopis. Both are French houses dealing in French clothing. Jacob Caro & Co. have an English house.

The better class of Chileans wear the best styles and cuts of clothing, but all are made to order. The middle classes wear well-cut clothing and good material. The poorer classes wear well-cut articles of sober colors, but of inferior quality. The two first mentioned wear the so-called all-wool material, and the latter all cotton.

JOHN F. CAPLES, *Consul*.

VALPARAISO, *August 31, 1899.*

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## COLOMBIA.

### CARTAGENA.

The sizes used are French numbers, namely, 38, 39, 40, 41, 42, 43, 44, 45, 46, from 39 to 43 being mostly in demand.

The class of goods imported is very poor: cotton drills and cotton and woolen mixtures. Prices range from \$3.60 to \$7.50 gold per suit.

The majority of importations come from France, and an open credit of from six to twelve months is granted to responsible houses. Weekly steamers come from the United States, but the costs of transportation are higher than from Europe.

The tariff rates are from 40 cents to \$1 gold per kilo gross, more or less, as the exchange varies daily.

The best means to be employed for the introduction of United States clothing would be to send energetic traveling agents, and open sample rooms where the goods could be exhibited.

Responsible dealers in ready-made clothing who are likely to handle our goods are Messrs. Kafael del Castillo, Leopoldo E. Villa, Joaquin Velez, Manuel Gomez & Co., Julio Delgado, S. L. Toledano, and R. and C. Benedetti.

Tastes vary; the wealthier classes use white drills, light tweeds, and flannels; the middle classes dark shades, and the lower classes bright colors. It would be essential to conform to such tastes. Ready-made clothing is worn mostly by the last named.

I think if a better quality of goods were put on the market, the better class would use them oftener.

Prices higher than \$7.50 would hardly meet a market, as light tweeds, imported from England, France, and Germany, and made to order here, cost very little more, and the men much prefer having them made in this way.

If American merchants would give terms of credit to responsible houses, I have no doubt they would be able to compete with European firms, especially if they could put a cheaper and neater article on the market. It is essential to send agents—men who can command respect—honest and patient, as business is not done here as quickly as in the United States. Merchants here are almost all reliable.

RAFAEL MADRIGAL, *Consul*.

CARTAGENA, *June 28, 1899.*

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#### COLON.

I have been informed by one of the leading merchants of this place that the first step to be taken to extend our trade is to have good, wide-awake salesmen, with showy samples, visit this market and impress the general public with the superiority of American ready-made clothing.

The class of goods sold here consists of serges, flannels, and tweeds, all of light weight.

Sizes of coats run from 34 to 48 inches, and trousers in proportion. The price of ready-made clothing that would find sale on this market would be from \$5 to \$12. For a little more than the last-mentioned

price, tailor-made clothing of a medium grade of English serge can be procured.

The chief consumers of ready-made clothing are West Indians, whose tastes are similar to those of the English and French.

Over 50 per cent of the ready-for-wear clothing sold on this market is imported from Paris, a period of from four to six months being allowed for payments and a tariff of 10 per cent ad valorem imposed.

As the cost of transportation from the United States is so much less than from European countries, our interests might be advanced by sending salesmen, as at first proposed, and allowing more liberal terms.

The names of responsible dealers in ready-made clothing who would be likely to handle American goods are as follows: U. G. de Leon & Co., A. James & Co., J. L. Taledano, C. Foulk, M. Chaezuela, C. Glover, G. Roma, L. Mucasel, Lee Sang & Co., and J. L. Maduro. There are a number of smaller firms that would carry a small stock of ready-made clothing, when once a demand had been created.

T. S. FLOURNOY COBBS,  
*Vice and Deputy Consul.*

COLON, *August 5, 1899.*

## ECUADOR.

The declared value of imports for the year ended December 31, 1898 (reduced to United States gold at 48.6 cents), is as follows:

| From—              | Woolens.   | Cottons. | Silks.     | Total.     |
|--------------------|------------|----------|------------|------------|
| France.....        | \$3,179.93 | \$57.36  | \$1,504.66 | \$4,741.95 |
| England.....       | 112.75     | 2,375.95 | 1,342.33   | 3,831.03   |
| Germany.....       | 1,093.01   | 582.22   | None.      | 1,675.23   |
| United States..... | None.      | None.    | None.      | None.      |
| All others.....    | 266.36     | 239.60   | 5.31       | 511.27     |
| Total.....         | 4,652.05   | 3,255.13 | 2,852.30   | 10,759.48  |

As the total amount is not equal to 1 per cent of the textile imports, it appears to be a very insignificant quantity, not worthy of consideration. Nearly all wearing apparel is made by local tailors, and skilled labor is cheap.

PERRY M. DE LEON,  
*Consul-General.*

GUAYAQUIL, *May 23, 1899.*

## THE GUIANAS.

Ready-made clothing valued at \$36,175 was imported into British Guiana during the year 1898. England furnished practically all of it. The duty on this class of goods is 10 per cent ad valorem.

The Quebec, the Armstrong, and Royal Dutch steamers ply regularly between New York and this port. Freight from England to Demerara is \$6 per ton of 40 cubic feet. From New York, it is \$4.

Not more than 20,000 of the entire population of 278,000 wear ready-made clothing. These comprise the colored and the Portuguese laborers; 75,000 others, mostly East India coolies, wear practically no clothing the year round. A certain class wears tailor-made clothes. A very good suit of this description can be made for \$7.

The size, quality, and price is as follows: Juveniles', 00 to 4; youths', 13, 1, 2, 2½; boys', 4 to 12; men's, 3 to 8, London sizes, all machine made, the class being from cheap to medium. Price for juveniles', 96 cents to \$1.92; youths', \$1.92 to \$2.88; boys', \$1.92 to \$3.60; men's, \$2.40 to \$4.80 per suit of two garments. The materials used are tweeds, serge, and coatings.

Men's blouses or sacks average 28 inches in length, and are lined with Italian cloth. Pants average 21½ at knee and 19 inches at the bottom.

The principal dealers in Demerara are D. H. McGowan & Co., Smith Bros. & Co., and M. N. Rieck.

In Surinam, or Dutch Guiana, the value of ready-mades imported can not be ascertained definitely, as men's furnishings are also included under that head at the custom-house.

The total value, as stated by our consular agent at Paramaribo (Mr. Deyo), was \$59,000 for 1898. Their ready-mades come from England and Germany. It is claimed that the latter country is increasing its trade with that colony in this line, their goods having lighter weight and better finish and being lower in price than English goods. A blue serge suit of fair quality costs from \$2.50 to \$5 in Europe and sells for from \$5 to \$10. The sizes are assorted, but mostly large ones are required, and the people who wear them are gold diggers. The agent asserts that the styles worn are peculiar to the locality and difficult to describe. The principal dealers at Paramaribo are W. T. Newsum and I. Haas. They buy goods on three and four months' time. Surinam imposes a duty of 12 per cent ad valorem on this class of goods.

Freight rates from Europe are \$10.56 per ton; from the United States, \$6. There is a bimonthly service from Europe and New York.

From inquiry and from observation, it is evident that the exporter of merchandise of this character should acquaint himself with the requirements of the Tropics through the personal efforts of expert agents, sent here to carefully study the market.

GEO. H. MOULTON, *Consul*.

DEMERARA, *May 27, 1899.*

## PARAGUAY.

Ready-made clothing does not seem to have gained a foothold in the Asuncion market. A heavy protective tariff is placed on ready-made goods, running as high as 50 per cent of the value. Tailors' charges are low, and the people of the better class have their clothes made. Only one house here imports ready-made clothing, and it is a branch of a firm in Paris. I doubt if it would handle our goods. A cheap grade of clothing, locally made, is sold for use in the interior of the country.

Sizes are about the same as in the United States. In 1898, the principal imports of ready-made clothing consisted of shirts, the duty being 90 cents per kilo; 20,354 kilos were introduced, valued at \$9,006.30 gold. There does not appear to be any ready-made clothing imported.

The retail prices of clothing run about as follows:

Suits for men, cassimere, \$38 or \$40, Paraguayan paper, equal to about \$5.50 and \$6 gold; cheviot suits with sack coats for men, \$60, \$70, and \$90 (\$9, \$10, and \$14 gold); sack coats of cassimere cost \$16, \$18, and \$20 (\$2.50, \$2.75, and \$3 gold); sack coats of wool, \$24, \$30, and \$33 (\$3.25, \$4.25, and \$4.75 gold); pantaloons of cassimere, \$12 (\$1.75 gold); white clothes, sack, \$9 and \$13 (\$1.50 and \$2 gold); pantaloons, \$6, \$9, and \$10 (\$0.75, \$1.50, and \$1.75 gold); alpaca, black or colored, \$18, \$24, \$28, \$35 (\$2.50, \$3.25, \$4, and \$5 gold); white shirts, bosoms of linen, \$9 (\$1.50 gold); white shirts with collars, 75 cents; white clothes or suits for children, \$8 (\$1.40 gold); suits for children, of cassimere, etc., \$11, \$14, and \$16 (\$1.75, \$2, and \$2.25 gold).

Transportation from Liverpool or Bremen to Buenos Ayres costs 40 shillings (\$9.72) per ton, about 4 or 6 shillings is charged for lighters there, and from Buenos Ayres to Asuncion, about 16 shillings, making in all about 60 shillings (\$14.59).

I think Paraguay offers no field for the introduction of ready-made clothing.

JOHN N. RUFFIN, *Consul*.

ASUNCION, *June 8, 1899.*

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## URUGUAY.

Some years ago, there was a very considerable import trade in ready-made clothing, France and Germany being the chief beneficiaries. It was noted by the authorities that business was growing at the expense of home labor, and the tariff was made prohibitive. The home industry now controls the market in this class of goods, and Uruguay has become an exporter to adjoining provinces of Brazil. The tariff was adjusted on lines that permitted the entry of the goods needed in the

manufacture at a comparatively low rate, and of machinery at a nominal charge.

The result is that, with a duty of 55½ per cent on ready-made goods and a specific valuation wholly at the judgment of the custom-house appraisers, no articles of this character can make a commercial entrance here from any land. Suits have been appraised at from \$14 to \$20 each, that could be purchased in any American market, retail, at from \$4 to \$6 less.

Only a few special things now come in from Europe, not exceeding \$6,000 in value for the past year, as shown by the statistics.

ALBERT W. SWALM, *Consul*.

MONTEVIDEO, *May 20, 1899.*

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## VENEZUELA.

### MARACAIBO.

In my opinion, it is hardly possible to establish a trade in ready-made clothing here, as the import duties are \$3.85 per kilo, gross weight, besides 12½ per cent on said sum for the interior revenue, thus constituting a prohibitory tax.

The poorer classes here wear mostly cheap drills, made at home. The better classes use white drill, cut by a tailor and made up by a seamstress; their best clothing is made by the merchant tailors, who always keep a large supply of foreign cloths and cassimeres on hand.

A good many of these tailors are Frenchmen, who work very cheaply and have a good deal of taste. The French fashion is mostly adopted. American and English plates are now, however, being exhibited in the stores.

A suit of clothes of the best foreign material made to order at Maracaibo costs much less than would be asked by a tailor in the United States.

To illustrate: I had, some years ago, a complete suit made of English blue serge, and being on leave of absence in the United States, wore it one day when visiting my tailor. He admired the suit and asked the price. I told him I had paid \$36.50 pesos, or \$28 gold.

My tailor said that he could not make the same suit of clothes for less than \$45, because of the duty upon such foreign material.

Some of the German merchants here have imported light alpaca and Japanese silk suits, but it seems that they do not meet with favor. I can not go into details of sizes, quality, or prices of ready-made clothing, as it is not used, with the exception of that kept by the German houses.

I believe another drawback to importing such articles would be that many insects injurious to clothing exist here. With the best care, I

found that all of my heavy clothing which I used in the States was eaten. Some of my coats looked as if they had been riddled with buckshot. Goods exposed to view in a store in large quantities could hardly be kept free from these ravages.

Many of the tailors here have formed clubs, in which members pay about 80 cents a week and have the chance of winning a cassimere suit made to order.

The names of firms dealing in ready-made clothing are: Breuer Moller Company, Almacen El Louvre; Blohm Company, Almacen El Louvre; Minlos Witzke Company, Au Bon Marcha, de Limé Fr. Company, Almacen; Paris & Nuñez, Num P. Leon, Christein & Co., Ball & Co.

The tailor merchants in Maracaibo are: Ramon Sanchez M., La Torre Eiffell; Victor Bessett, La Ville de Paris; Victor Rosseau, La Moda; Ortin P. Francisco, El Magasin Universal; Antonio de Castro, El Buen Gusto.

E. H. PLUMACHER, *Consul*.

MARACAIBO, *May 10, 1899.*

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#### PUERTO CABELLO.

There has been no trade here in ready-made clothing, owing, no doubt, to the duty of 20 bolivars per kilogram, which, together with an internal-revenue duty of 12½ per cent, would amount to about \$2 per pound on all goods of this class, including weight of package.

I further believe the style of goods and the cut of clothing in vogue here would not be similar to those of the United States.

WM. H. VOLKMAR, *Vice-Consul*.

PUERTO CABELLO, *May 3, 1899.*



## FOREIGN IMPORTS OF AMERICAN TOBACCO.

### DEPARTMENT INSTRUCTION.

DEPARTMENT OF STATE,  
*Washington, August 30, 1899.*

*To certain consular officers of the United States.*

GENTLEMEN: Some leading members of the Richmond Tobacco Exchange have requested the Department to secure, through the good offices of the consuls, statistics relative to the exports of American tobaccos to the principal ports of the several countries, for the benefit of the general trade.

In foreign countries, according to the Department's correspondents, all Virginia and Carolina tobaccos are classed as "Virginias," while Tennessee, Kentucky, and heavy Ohio tobaccos are classed as "Western."

The statistics particularly desired are embraced by the following queries:

1. The total imports of unmanufactured (leaf) tobaccos into the port at which you are stationed, whence imported, and the proportion of "Virginias" and "Western" therein.
2. Are the importers of tobacco in your port manufacturers or merely dealers?
3. The names of the principal importers of tobacco?
4. Are there any faults found with the packing or qualities of American tobaccos; how do these compare with foreign tobaccos?
5. Give such other information as in your opinion will tend to the benefit of the American trade.

The Department's correspondents are especially interested in securing information concerning bright "Virginias," which are used by the cigarette and smoking trade.

You are therefore requested to make the necessary investigation into the subject under consideration and report results to the Department at your earliest convenience.

I am, gentlemen, your obedient servant,

THOS. W. CRIDLER,  
*Third Assistant Secretary.*

## EUROPE.

### AUSTRIA.

According to the statistics of the Trieste Chamber of Commerce, the total imports of manufactured (leaf) tobaccos at this port amounted in 1898 to 84,948 quintals, or 18,727,637 pounds. However, about 22 per cent of this quantity, or 18,525 quintals (4,084,022 pounds), came from other Austro-Hungarian ports. The remainder, 66,423 quintals (14,643,615 pounds), was imported from the following countries:

| Countries.                     | Quintals. | Pounds.      |
|--------------------------------|-----------|--------------|
| Turkey in Europe.....          | 50, 223   | 11, 072, 168 |
| Turkey in Asia.....            | 6, 788    | 1, 496, 482  |
| Egypt.....                     | 6, 333    | 1, 396, 178  |
| China.....                     | 1, 588    | 348, 988     |
| Great Britain and Ireland..... | 957       | 210, 980     |
| Italy.....                     | 232       | 51, 147      |
| Greece.....                    | 166       | 36, 566      |
| Russia.....                    | 89        | 19, 622      |
| Belgium.....                   | 27        | 5, 952       |
| Germany.....                   | 23        | 5, 071       |
| Roumania.....                  | 2         | 441          |
| Total.....                     | 66, 423   | 14, 643, 615 |

It will be noticed that the United States is not in this list. If any American leaf tobacco is imported here, it probably comes via London or Liverpool and is credited to Great Britain. At any rate its identity is lost, and the terms "Virginias" and "Western" are not familiar to the tobacconists of southern Austria.

The manufacture and retail sale of tobacco are a government monopoly in this country. Wholesale trade may be carried on by private parties, but a special license is required for the purpose, and the business is under strict government supervision. Thus, the entire stock of every wholesaler in tobacco must be kept in government warehouses and is guarded by revenue officers. In addition to this, the dealer must render from time to time minute accounts of his purchases and sales. While every bale, bundle, or package of tobacco that passes in or out is carefully weighed by revenue officers detailed for the purpose, the dealer is nevertheless held responsible for any discrepancy that may be found at the end of the quarter. The revenue laws of the State are therefore not favorable for making Trieste an international mart or port of distribution for tobacco.

The following firms are the only importers of tobacco in this city: Antonio di Demetrio, Poste vecchie 14; C. Dragovina, Corso 709; Carlo di Ott, Fontana, via Gheza 8; Girolamo Marpurgo, via Poste 22.

As has already been stated, American tobaccos are not imported here, and very little is known in trade circles of their qualities. All tobacco for home consumption is purchased and manufactured by the government. As far as I am able to learn, there has been practically no change in the kinds of smoking tobacco, cigars, and cigarettes produced in the government factories during the past twenty years. Austrian smokers are very conservative, and would probably frown down any attempt of the government to experiment with new brands. As the schedule of tobacco, cigars, and cigarettes to be manufactured and offered for sale is prepared by the Imperial Royal "Taback Regie" at Vienna, and is uniform for the whole Empire, individual importers and wholesalers of leaf tobacco are powerless to introduce or create a demand for new goods, and it is, under these circumstances, not strange that they take no interest in and know nothing whatever of the qualities of our tobacco.

About 80 per cent of all the tobaccos imported here is of Turkish origin, and is used almost exclusively for the manufacture of cigarettes. Connoisseurs say that our light "Virginias" would blend well with the various kinds of Turkish, Greek, and Egyptian tobaccos. It is, however, difficult to see how a market for the American product could be established in Austria, except through the "Central Taback Regie" at Vienna.

FREDK. W. HOSSFELD, *Consul.*

TRIESTE, *October 18, 1899.*

## BELGIUM.

The total importation at Antwerp of unmanufactured tobacco for consumption in this country in 1898 was 245,762 pounds stemmed and 19,061,820 pounds of a quality not specified. Of this quantity, the importations from the United States amounted to 176,218 pounds of the stemmed and 10,890,118 pounds quality unspecified. The importations from the other countries of the world were:

| Stemmed:              | Pounds.  | Not specified—Continued. | Pounds.     |
|-----------------------|----------|--------------------------|-------------|
| China .....           | 16, 993  | China .....              | 183, 881    |
| France .....          | 15, 161  | Cuba and Porto Rico .... | 78, 219     |
| Hamburg .....         | 831      | France .....             | 621, 058    |
| Holland .....         | 23, 470  | Hamburg .....            | 151, 791    |
| Philippines .....     | 4, 652   | English Indies .....     | 1, 087      |
| Other countries ..... | 8, 437   | Dutch Indies .....       | 484, 992    |
| Total .....           | 69, 544  | Mexico .....             | 79, 573     |
|                       |          | Holland .....            | 4, 324, 102 |
| Not specified:        |          | Philippines .....        | 172, 217    |
| Germany .....         | 526, 690 | Turkey .....             | 25, 011     |
| Austria .....         | 109, 324 | Other countries .....    | 160, 151    |
| Bremen .....          | 925, 559 |                          |             |
| Brazil .....          | 328, 047 | Total .....              | 8, 171, 702 |

The classification "Western" is not in use here, and it has been impossible for me to obtain the proportion of the importations from Virginia and the first mentioned. The classification existing in this port is given in the following table, which shows the importations of the different sorts for 1898:

| Description.                   | Kentucky.                 | Virginia.                 | Maryland and Ohio.      | Total.                    |
|--------------------------------|---------------------------|---------------------------|-------------------------|---------------------------|
| Importations during 1898 ..... | <i>Hogsh'ds.</i><br>5,789 | <i>Hogsh'ds.</i><br>1,245 | <i>Hogsh'ds.</i><br>511 | <i>Hogsh'ds.</i><br>7,445 |
| Stock, end of December .....   | 1,968                     | 436                       | 192                     | 2,596                     |

The importers of tobacco in this district are, generally speaking, merely dealers, with the exception of one or two large manufacturers who import on their own account: C. Craen & Fils, Rue Van Maerlandt, 45-47, Antwerp; Ch. Grewel, Rue Conscience, 31-33, Antwerp; H. Grewel, Rue de la Liberté, 32, Antwerp; Nyssens Frères, Rue des Peignes, 33, Antwerp; A. Stein & Co., Rue Killiaan, 10, Antwerp; E. A. Tinchant, Rempart des Béguines, 6, Antwerp; Verellen Frères, Rue Klapdorp, 70, Antwerp; Verellen Frères, Marché St. Jacques, 81, Antwerp; Léon Dufour & Co., Rempart St. Georges, 43, Antwerp; L. Hartog, Rempart St. Georges, 23, Antwerp; G. & C. Kreglinger, Grande Place, 19, Antwerp; H. Windelinckx, Rempart St. Georges, 72, Antwerp.

The only complaint that has been brought to my notice was contained in the annual report of the chamber of commerce of this city for the year 1898, in regard to the packing of Kentucky tobacco, viz:

Our commerce has suffered losses in consequence of the fraudulent packing and bad condition of Kentucky tobacco in general. The fine grade of tobacco was a great sufferer from this state of affairs. Manifest frauds were clearly shown in a protest submitted to the respective chambers of commerce of those districts from which the defective shipments were made.

*Virginia.*—The importations and sales in this country were equal in quantity to those of the preceding year.

*Maryland and Ohio.*—The importations and sales of these varieties, though small, exceeded the figures of preceding years.

There is only one large manufacturer known to me who makes cigars and all-tobacco cigarettes. The cigarette manufacturers as a rule are found within the limits of the city of Brussels.

GEO. F. LINCOLN,  
*Consul-General.*

ANTWERP, *October 25, 1899.*

## DENMARK.

The total imports of unmanufactured (leaf) tobaccos are about 10,000,000 pounds, of which about one-fourth is of American origin, and of the latter one-sixth is "Virginia" and the balance "Western." The tobacco is imported via Bremen and Hamburg. Manufacturers and dealers state that the assortment is large at these ports and the terms of payment easy. American exporters have tried to deal with the Copenhagen manufacturers direct, but the attempts have not been successful. The Danish importers are not only manufacturers, but also dealers.

The principal importers are Adler, Julius, 36 Vimmelskaftet, Copenhagen; Augustinus, Chr., 5 Vestergade, Copenhagen; Braun, Brødrene, 50 Prinsessegade, Copenhagen; Hirschsprung & Sons, 6 Østergade, Copenhagen; E. Jensen, 11 Pederhvidtfeldtstræde, Copenhagen; Krüger, Herm., 13 Kultarvet, Copenhagen; Horwitz & Kattented, 29 St. Kongensgade, Copenhagen; Lichtinger, J., 42 Nyhavn, Copenhagen; Marsmann, H., 4 Frederiksholm Kanal, Copenhagen; Nobel, E., 11 Vestergade, Copenhagen; Rasmussen, Alex, 38 Frederiksborggade, Copenhagen; Ree & Bay, 14 Gothersgade, Copenhagen; Obel, C. W., Aalborg, Jutland, Denmark; Brun, S. W., Kolding, Jutland, Denmark; Nobel, E., Nykjöbing, Falster, Denmark; Damborg, Th., Nykjöbing, Jylland, Denmark; Thuesen, J. M., Nyborg, Fyen, Denmark; Nielsen, H., tobacco manufacturer, Odense, Fyen, Denmark; Bendixen, F. C., Thisted, Jutland, Denmark.

The commercial agency of P. V. Fournais & Co., 16 Gl Torv, Copenhagen, can, for a small fee, rate any firm in Denmark. The packing of tobacco is not considered satisfactory, especially that from Kentucky. The quality generally gives satisfaction. As indicated above, I think it of doubtful wisdom to trade direct with Denmark on a large scale, unless the exporters keep a large stock of American tobacco here in Copenhagen and make terms of payment easy; but the Danish market is no doubt too small, and Danish importers and manufacturers will probably continue to draw their supplies from Bremen and Hamburg.

American cigarettes are sold here to a small extent, but they are not in favor with the Danish public. Russian and Egyptian cigarettes are preferred.

"Bright Virginias" are hardly used at all in Denmark.

JULES BLOM,  
*Vice and Deputy Consul.*

COPENHAGEN, *September 13, 1899.*

## FRANCE.

## HAVRE.

The total amount of tobacco imported at the port of Havre during the year 1898 is given in the following table. The proportion of "Virginia" and "Western" tobacco comprised therein, however, can not be given, as no such classification is made by the French custom-house:

|                    | Tons. |                           | Tons. |
|--------------------|-------|---------------------------|-------|
| Germany .....      | 1,016 | Republic of Colombia..... | 65    |
| Netherlands.....   | 111   | Brazil.....               | 24    |
| Belgium .....      | 14    | Haiti.....                | 357   |
| Greece.....        | 22    | Algeria .....             | 92    |
| Turkey .....       | 384   |                           |       |
| Philippines .....  | 163   | Total .....               | 7,432 |
| United States..... | 5,184 |                           |       |

Large quantities of the leaf are imported annually from the United States, although the greater part of the tobacco consumed is raised in the country itself. Every year, an estimate is made of the amount needed for the ensuing twelve months. The Government then gives notice that a certain quantity of Virginia, Ohio, Kentucky, and Maryland leaf tobacco is required, and asks for bids. On the 29th and 31st days of May of this year, for example, bids were requested for 13,530,000 pounds of Kentucky tobacco; 880,000 pounds of Virginia; 7,930,000 pounds of Maryland, and 1,760,000 pounds of Ohio tobacco of the crops of 1897 and 1898. Merchants or dealers can inspect samples of the quality required, in order to make their offers, and it goes without saying that the lowest bidder receives the contract. The grades of tobacco to be furnished are divided into three classes, to wit, A, B, and C, each initial being preceded by the first letter of the name of the State from which the tobacco comes; as M. A. (Maryland, first quality), O. B. (Ohio, second quality), etc.

This year, the 7,920,000 pounds of Maryland tobacco of the crops of 1897 and 1898 conforming to the three types M. A., M. B., and M. C. were to be delivered at the ports of Havre, Bordeaux, and Marseilles in the following proportions: 25 per cent of the first quality, 45 per cent of the second, and 30 per cent of the third quality. The tobacco was to be delivered in four lots of 1,980,000 pounds each, and a guaranty or bond of \$9,650 had to be deposited by the contractor for the proper delivery of each respective lot, or \$39,800 if he received the contract to furnish the total amount. The tobacco was to be of pure Maryland growth, and Ohio tobacco known under the name of "clean scented" was rigorously excluded. There were to be three deliveries, one-third before the 10th of October, 1899, one-third between October 10, 1899, and January 10, 1900, and one-third between January 10, 1900, and April 1, 1900. Tare, 15 per cent.

Of Kentucky tobacco, there were to be delivered 13,530,000 pounds, of which 9,250,000 pounds were to be light, 770,000 pounds dark, and 3,520,000 pounds "burley." As a guaranty of delivery, the sum of \$14,475 had to be deposited for each lot of the light tobacco, \$3,860 for the dark, and \$9,650 for the "burley," a total of no less than \$110,010. Of the light and medium tobacco, portions were to be delivered at Havre, Marseilles, and Bordeaux, while the dark was to be delivered at Havre and Marseilles. The deliveries were to be made at the same time as the Maryland tobacco. Tare, 11 per cent for the light and dark tobacco and 13 per cent for the medium.

Of Virginia tobacco, there were to be delivered 880,000 pounds during or at the same period as the foregoing. A deposit of \$1,544 was required as a guaranty, and the deliveries were to be made in the time above specified. Tare, 10 per cent.

Of Ohio tobacco, 1,760,000 pounds were to be delivered at the above-named periods. A deposit of \$8,685 was required, and a tare of 13 per cent allowed for.

The fact must not be lost sight of that all the tobacco imported for use in France must be delivered to the Government. In other words, the importer merely acts as the Government's agent or broker for one, or, possibly, a series of contracts, and can not deal in the article on his own account except for reexportation. Accordingly, it may be said that all the importers of tobacco in France are dealers and not manufacturers. An American or foreign business house may make bids for the delivery of tobacco, but all bids must be indorsed by a French house, or at least one having an establishment in France, which can either act on its own account or guarantee a foreign concern. The contracts always being given out in Paris, the bids are made in that city, and the dealers are usually located there. The names of the principal bidders are L. Huffer & Co., Boudin & Brouwer, and Denulze & Co. Having inquired from the Havre representative or transit agent of one of these houses why the number of dealers in tobacco was so limited, I was informed that there was very little money in the business, and that losses were as frequent as profits.

Many complaints are made regarding the packing of American tobacco, and it often occurs that the Government (after receiving its consignments) notifies the person or dealer having delivered the same that it has discarded as useless, and refuses to pay for, say, 100 pounds of one barrel, 50 pounds of another, etc. The quantity discarded consists almost invariably of sweepings or refuse of the tobacco packer's establishment of America. The loss occasioned by such adulterations must be sustained by the importer, who in turn has a counterclaim against the shipper in the United States.

The tobacco imported into France comes chiefly from Ohio, Maryland, Kentucky, and Virginia. But the bright Virginia tobacco, such

as is used for cigarette making in the United States, is not extensively employed. On the contrary, the Virginia tobacco imported into France is generally dark in color, very strong, and is used for making chewing tobacco.

For the benefit of American tobacco merchants who either desire to bid for contracts in France, or to know how such bids are made, I append a translation of one of the notices published by the Government requesting offers. It requests bids for Ohio tobacco only:

ARTICLE 1. On Wednesday, May 31, 1899, at 3 o'clock in the afternoon, there will be opened in public at the ministry of finance, Paris, bids for the furnishing of 1,760,000 pounds of Ohio leaf tobacco of the crops of 1897 and 1898, identical in quality to the three types fixed upon by the administration and marked O. A., O. B., and O. C., in the proportion of 10 per cent of type A, 50 per cent of type B, and 40 per cent of type C. Samples of these three types are to be found at the Government tobacco manufactory of Paris, where bidders may see and examine them.

ART. 2. Unless hereinafter specified, bidders must conform to the rules and requirements set forth in the "Schedule of conditions" imposed upon dealers furnishing leaf tobacco to the Government, dated December 16, 1884, and approved by the minister of finance February 9, 1885.

ART. 3. The amount contracted for must consist of 1,760,000 pounds, and the quality in proportion to the percentages indicated in article 1.

ART. 4. The person to whom the contract is granted must deposit with the Government, as a guarantee, the sum of \$8,685.

ART. 5. The 1,760,000 pounds contracted for must be delivered at the ports of Havre, Bordeaux, and Marseilles in the following proportions:

| Ports.          | Type A.        | Type B.        | Type C.        | Total.         |
|-----------------|----------------|----------------|----------------|----------------|
|                 | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| Havre.....      | 77,000         | 396,000        | 238,200        | 761,200        |
| Bordeaux.....   | 52,800         | 312,400        | 236,400        | 600,600        |
| Marseilles..... | 46,200         | 171,600        | 180,400        | 398,200        |
| Total.....      | 176,000        | 880,000        | 704,000        | 1,760,000      |

ART. 6. The quantities contracted for must be delivered during three distinct periods, to wit: One-third before October 10, 1899; one-third between October 10, 1899, and January 10, 1900; and one-third between January 10, 1900, and April 10, 1900. After the last-named date, no tobacco will be accepted by the Government, even to replace certain quantities which may have been refused.

ART. 7. The bids must be in conformity with the model hereinafter given, and the price per 100 kilograms (220 pounds) net of type B must be clearly stipulated. The Government will pay for the tobacco designated as type A, 15 per cent more than the price paid for type B, and for type C, 20 per cent less than for type B. In computing the prices of types A and C, fractions of centimes will be thrown out.

ART. 8. The tare will be placed at 13 per cent. The barrels must be delivered in good condition, with the usual number of hoops; that is to say, two at each end, or four in all. Any extra hoops or headings will be counted as an extra tare. The administration reserves for itself at all times the right to establish the actual tare, which will be calculated by weighing a number of barrels equal to a twentieth part of the shipment, the proportion being taken each day by drawing lots.

ART. 9. The stamp taxes of the present schedule are payable by the contractor.

ART. 10. The first paragraph of article 38 of the "General schedule of conditions" of December 16, 1884, is superseded by the following:

In the event of the contractor failing to deliver on the last-mentioned date the stipulated quantities of each type (consideration being taken of the allowances made on the part of the administration by virtue of article 33 of the "General schedule of conditions") he will be obliged to pay a forfeit of 20 per cent of the value of the quantity not delivered.

ART. 11. The present schedule of conditions will be filed in the office of the central administration in Paris, and in Bordeaux, Havre, and at the French consulates of New York and Baltimore.

Passed upon by the administration council at its meeting of April 7, 1899.

BRUNER.

BARDOT.

Approved April 18, 1899.

PETRAL, *Minister of Finance.*

#### MODEL OF BID.

I, the undersigned, ———, merchant of ———, having read the general schedule of conditions imposed upon contractors of leaf tobacco, dated December 16, 1884, and approved by the minister of finance on February 9, 1885, as well as the special schedule of conditions for the delivery of the present contract for Ohio tobacco, declare myself responsible, and agree to the clauses and conditions therein expressed, which I accept without reserve, and agree to deliver to the administration of tobacco in its factories the quantity of ——— kilograms of Ohio leaf tobacco, conforming to the three types marked O. A., O. B., and O. C., samples of which are exposed at the manufactory of tobacco in Paris, and which I have carefully examined, as follows:

One lot of ——— kilograms at the price per metric quintal for type O. B. of ——— francs.

As a guarantee of the present bid I deposit in the hands of the administration the sum of ——— francs, declaring my address to be ———.

A. M. THACKARA, *Consul.*

HAVRE, *September 21, 1889.*

#### MARSEILLES.

According to the local understanding, all American tobaccos of Virginia or North Carolina origin are classed as "Virginias" and all others as "Western." The entire tobacco trade of the country is controlled by the State, which lets contracts annually for the delivery of leaf tobacco during the following year, beginning with May 1. For the entire French service of 1899—that is, for delivery between May 1, 1899, and May 1, 1900—the State has contracted as follows:

| Kind.                                    | Kilos.     | Pounds.    |
|--|------------|------------|
| Kentucky:                                |            |            |
| Paducah varieties, about .....           | 4,200,000  | 9,259,300  |
| Clarks ville varieties, about .....      | 350,000    | 771,600    |
| Burley, about .....                      | 1,600,000  | 3,527,300  |
| Virginia, about .....                    | 400,000    | 881,800    |
| Ohio, about .....                        | 800,000    | 1,763,600  |
| Maryland, about .....                    | 3,600,000  | 7,936,500  |
| Total for account of Government .....    | 10,950,000 | 24,140,100 |
| Entered for reexport to other countries: |            |            |
| Kentucky—                                |            |            |
| Burley .....                             | 800,000    | 1,768,700  |
| Approximate grand total for France ..... | 11,750,000 | 25,908,800 |

The arrivals of this quantity of tobacco are divided among the three leading ports as follows:

| Ports.          | Kilos.    | Pounds.    |
|-----------------|-----------|------------|
| Marseilles..... | 3,150,000 | 6,944,500  |
| Bordeaux.....   | 3,650,000 | 8,046,800  |
| Havre.....      | 4,950,000 | 10,912,700 |

In the city of Marseilles, actual imports for the first six months of 1889 were as follows:

| Origin.                     | Kilos.    | Pounds.   |
|-----------------------------|-----------|-----------|
| From the United States..... | 453,187   | 999,096   |
| From Algeria.....           | 578,910   | 1,276,265 |
| Various countries.....      | 2,404,898 | 5,301,838 |

The importers of tobacco at this port are Government contractors, who also do as much as they can with other countries. There are two such firms in Marseilles, J. & E. Karsenty Fils & Cie., 18 Boulevard de Rome, and Brunon & Rothé, 73 Rue Paradis.

With reference to packing, one informant tells me that American tobaccos are the only ones received here in hogsheads. The packing and package are satisfactory, but complaint is made, applied particularly to tobaccos arriving from Kentucky, that mixed with the good tobacco are many "lugs"—low-lying leaves—of quality so palpably inferior as to constitute evidence of a disposition to defraud on the part of the packer or planter. The same person says that if complaints on this score continue customers in France and abroad will certainly find it advantageous to cultivate new alliances. The sorting of tobaccos should be carefully done when the package is made up, and every package should contain one quality only, alike in length and color. A second informant says that these frauds in packing caused a great deal of unpleasant controversy two years ago, and that the packers of the offending "Western" tobaccos paid the differences. He reports that since that flurry, "matters have gone on more satisfactorily."

"Bright Virginias," used by the cigarette and smoking trade, are not used for the French home trade and consumption. Some business with this variety of Virginia is, however, done with Eastern countries.

Messrs. Karsenty Fils & Cie. say to me that if bright North Carolina tobaccos could be delivered here f. o. b. for between \$9.65 and \$11.58 per 100 kilos (220 pounds), they could compete on favorable terms with Turkish tobacco and be sold in considerable quantities. The length would be immaterial, but the color would have to be yel-

low, without any greenish tint. The same people say that they can place a large quantity of "Bright Virginia" cigarettes, if low prices are submitted.

The tobacco-manufacturing industry is free in Algeria, and it is suggested that there is an opening there not only for more American leaf, but for American machinery. Some few American cigarette machines are now in use in that colony. The French Government buys many cigarettes in Algeria, Marseilles alone receiving for local consumption more than 650 cases of Algerian cigarettes during 1898, and the total importation amounting to 7,626 cases. The Marseilles Chamber of Commerce reports that the Algerian manufacturers produce very decent cigarettes at 48 cents per thousand, in neat packages, and in cases of 500 packages. The most important manufacturers in Algeria are J. Bastos, Oran; J. Donates, Oran; Dahan Frères, Oran; D. Bertomen & Frère, Algiers; J. Clement & Frère, Algiers; V. Melia, Algiers; G. Jobert, Mostaganam.

The following is a statement of the quantities of tobacco worked in the State manufactories during the last five years:

| Description.       | 1893.      |            | 1894.      |            | 1895.      |            |
|--------------------|------------|------------|------------|------------|------------|------------|
|                    | Kilos.     | Pounds.    | Kilos.     | Pounds.    | Kilos.     | Pounds.    |
| Cut tobaccos ..... | 25,151,911 | 55,449,903 | 24,897,068 | 54,906,076 | 25,636,091 | 56,517,325 |
| Cigars .....       | 3,168,568  | 6,985,425  | 3,097,891  | 6,829,610  | 2,914,093  | 6,424,409  |
| Cigarettes .....   | 1,160,490  | 2,558,416  | 1,235,060  | 2,722,813  | 1,246,779  | 2,748,649  |

| Description.       | 1896.      |            | 1897.      |            |
|--------------------|------------|------------|------------|------------|
|                    | Kilos.     | Pounds.    | Kilos.     | Pounds.    |
| Cut tobaccos ..... | 26,506,205 | 58,435,580 | 27,056,178 | 59,648,050 |
| Cigars .....       | 2,796,805  | 6,165,836  | 2,772,995  | 6,113,124  |
| Cigarettes .....   | 1,368,286  | 3,016,523  | 1,411,798  | 3,112,450  |

ROBERT P. SKINNER, *Consul.*

MARSEILLES, *November 29, 1899.*

## NANTES.

The manufacture of tobacco in France is a State monopoly. All leaf tobacco is imported through the bureau central in Paris by order of the director-general. When imported, it is consigned to one of the magazines of transit, which are located at Marseilles, Le Havre, Bordeaux, and Dunkirk. From these magazines, it is distributed among the various establishments in France for the manufacture of tobacco. They are located as follows: Three in Paris and one in each of the following cities: Lille, Dieppe, Le Havre, Morlaix, Nantes, Bordeaux, Tonneins, Marseilles, Nice, Lyons, Riony, Dijon, Nancy, Orleans, Le Mans, Toulouse, and Chateauroux. During the year 1898, nearly

6,600,000 pounds of leaf tobacco were used in the Nantes factory. Of this amount, France and Algiers furnished 4,375,800 pounds; Kentucky, 1,256,540 pounds (of which 478,740 pounds were light and 777,800 dark tobacco); Maryland, 528,000 pounds; Brazil, 242,000 pounds; Java, 37,400 pounds; Samsony, 138,600 pounds; and Ukraine, 17,600 pounds. The tobacco manufactured at the factory in Morlaix, east of Nantes, during the year 1898 all came from the United States, as follows: Virginia, coarse, 90,200 pounds; Kentucky, 1,154,000 pounds; (about three-fourths being heavy or dark tobacco and one-fourth being light), and Maryland, 70,400 pounds. The director of the Nantes factory informs me that they use but little Virginia tobacco. One hogshhead received some time since was packed so closely it was almost impossible to separate the leaves without destroying a large percentage of them.

The various kinds of tobacco received at Nantes are mixed together to produce a desired flavor, except the light Maryland, which is regarded as a very fine quality. While the director makes no special complaint about the manner in which the American tobacco is packed, namely, in large hogshheads, yet he says the weight of the wood adds considerably to the cost of transporting the tobacco from the magazines to the factories inland. The tobacco from other countries is packed in burlap bales, which are smaller and more convenient to handle. The director of the factory at Morlaix says the artificial drying of American tobacco is often improperly done, resulting in great loss. He makes special complaint of the manner in which the light Kentucky is dried, claiming the moisture remaining in this tobacco causes it to ferment in the packages. He also complains of a sticky black substance used in packing dark Virginia tobacco, which renders the manipulation of the article very difficult, and says that the Kentucky and Virginia goods are too tightly packed in the hogshheads, causing much of the tobacco to be broken in removing the hogshhead, which is broken away piece by piece. He would much prefer having the tobacco packed in bales covered with burlap, and weighing from 300 to 500 kilograms (661-1102 lbs.) each. The quality and flavor of the American goods are well regarded.

In passing through the Nantes factory, I made inquiry about machinery used, and was informed the principal apparatus came from England. All cigars in this factory are made by hand, eight hundred women being employed in that department alone. I was also informed that the management contemplates making the cigars by machinery after next year, as they now do with cigarettes. I would suggest that the American manufacturers of machinery for making cigars and cigarettes keep this matter before their minds.

JOSEPH I. BRITAIN, *Consul*.

NANTES, *October 26, 1899.*

## RHEIMS.

I submit the following tables:

*Consumption of tobacco in France for the year 1897.*

| Description.                         | Number of pounds. | Value.           |
|--------------------------------------|-------------------|------------------|
| Cigars from Habana and Manila .....  | 84, 982           | \$832, 934. 60   |
| French cigars .....                  | 6, 693, 690       | 10, 527, 633. 00 |
| Total .....                          | 6, 777, 662       | 11, 360, 567. 60 |
| Cigarettes, all kinds .....          | 3, 239, 159       | 7, 770, 536. 00  |
| Imported tobacco, fine quality ..... | 3, 698, 134       | 4, 812, 613. 80  |
| Smoking tobacco .....                | 56, 155, 392      | 41, 197, 104. 60 |
| Chewing tobacco .....                | 1, 170, 668       | 1, 223, 767. 20  |
| Snuff, fine quality, imported .....  | 10, 755, 551      | 11, 202, 340. 00 |
| Snuff, ordinary .....                | 143, 493          | 23, 096. 80      |
| Total .....                          | 10, 899, 044      | 11, 225, 436. 80 |
| All other kinds of tobacco .....     | 1, 313, 628       | 1, 468, 830. 20  |
| General total .....                  | 82, 253, 655      | 79, 048, 856. 20 |

This statement is approximately, but not exactly, correct, it having been figured upon the basis of 2.20 pounds per kilogram and 20 cents for 1 franc.

*Places of manufacture of tobacco, cigars, and cigarettes in France.*

| City.             | Department.       | City.          | Department.         |
|-------------------|-------------------|----------------|---------------------|
| Bordeaux .....    | Gironde.          | Nancy .....    | Meurthe-et-Moselle. |
| Chateauroux ..... | Indre.            | Nantes .....   | Loire Inferieure.   |
| Dieppe .....      | Seine Inferieure. | Nice .....     | Alpes Maritimes.    |
| Dijon .....       | Côte-d'Or.        | Orleans .....  | Loire.              |
| Le Havre .....    | Seine Inferieure. | Paris .....    | Seine.              |
| Le Mans .....     | Sarthe.           | Pantin .....   | Do.                 |
| Lille .....       | Nord.             | Riom .....     | Puy-de-Dôme.        |
| Lyon .....        | Rhone.            | Tonneins ..... | Lot-et-Garonne.     |
| Marseilles .....  | Bouches-du-Rhône. | Toulouse ..... | Garonne.            |
| Morlaix .....     | Finistère.        |                |                     |

*Unmanufactured tobacco imported by the French Government during the year 1897.*

| From.               | Number of pounds. | Value.            | From.         | Number of pounds. | Value.        |
|---------------------|-------------------|-------------------|---------------|-------------------|---------------|
| United States ..... |                   |                   | Mexico .....  | 26, 692           | \$20, 954. 17 |
| Kentucky .....      | 12, 247, 897      | \$1, 215, 212. 02 | Samsun .....  | 1, 328, 685       | 154, 228. 97  |
| Maryland .....      | 8, 148, 287       | 977, 287. 03      | Ukraine ..... | 1, 885, 008       | 72, 635. 81   |
| Virginia .....      | 992, 668          | 42, 219. 19       | Sumatra ..... | 317, 862          | 320, 298. 43  |
| Brazil .....        | 3, 173, 517       | 845, 870. 04      | Java .....    | 637, 883          | 372, 213. 84  |

## GERMANY.

## BERLIN.

There is, so far as can be ascertained, no manufactory of any importance which consumes as material Virginia or Carolina tobacco leaf. Nearly all the raw leaf used here is from Brazil or the Dutch East India colonies. As tobacco is also grown in Germany, the whole import trade is under strict surveillance and control by the German

Government, and the conditions imposed are such as to concentrate the entire business at the free ports of Bremen and Hamburg.

When raw tobacco has once crossed the German frontier, it is held in bond until duty is paid under such regulations that its sale in open market would be attended with such difficulties that this method is not practiced. Merchants and manufacturers who deal in or consume imported tobacco leaf resort therefore to Bremen, which is the mart of that trade for the German Empire and the source of all definite information in respect to grades, prices, and qualities.

Official statistics show that Germany imported during the year 1898 57,415 metric tons<sup>1</sup> of raw tobacco leaf and 2,540 tons of stems, besides 771 tons of what is known commercially as "tobacco sauce." Of this imported leaf, 12,738 tons came from the Dutch East Indies, 14,992 tons from Brazil, 474 tons from Puerto Rico, and 10,981 tons from the United States, the remainder being derived from various countries, principally Turkey, Holland, Haiti, Colombia, and Mexico. Of tobacco stems, which are used in the manufacture of snuff, our country furnished 2,843 tons, or nearly the entire imported supply. Of ready-made cigars, Puerto Rico supplied 121 out of a total of 301 tons imported during the year.

Coming down to 1899, we find that the total import of tobacco leaf during the seven months ended August 31 was 38,675 tons, of which Holland supplied 5,706, Turkey 1,269, the Dutch Indies 9,711, Brazil 8,743, Haiti 1,598, and the United States 7,202 tons, besides 1,659 tons of stems during the same period. The city of Berlin consumed in 1898 only 4.52 per cent of the total German import of tobacco leaf, 22.44 per cent of the imported cigars and cigarettes, and 20.84 per cent of the import of manufactured tobacco. The great manufactories of tobacco and cigars are concentrated at Bremen, Hamburg, and at Duisburg-on-Rhine.

FRANK H. MASON, *Consul-General*.

BERLIN, *October 18, 1899.*

### BREMEN.

There was imported here during the years 1894 to 1898, from December 1 to November 30, in metric tons:

| From—              | 1894.  | 1895.  | 1896.  | 1897.  | 1898.  |
|--------------------|--------|--------|--------|--------|--------|
| Kentucky .....     | 10,060 | 12,742 | 13,184 | 12,875 | 9,829  |
| Virginia .....     | 3,646  | 2,398  | 2,938  | 3,331  | 2,297  |
| Maryland .....     | 1,271  | 1,040  | 850    | 1,683  | 920    |
| Ohio and Bay ..... | 374    | 132    | 200    | 330    | 219    |
| Stamps .....       | 1,819  | 2,041  | 1,309  | 2,100  | 3,807  |
| Seed leaf .....    | 3,312  | 3,121  | 4,321  | 4,508  | 2,304  |
| Total .....        | 20,470 | 21,474 | 22,797 | 24,827 | 19,376 |

<sup>1</sup> Of 2,204.6 pounds.

With one exception (E. F. Schellhass Söhne), the importers at this place are merely dealers; the above-mentioned firm manufactures principally smoking tobaccos.

The chief dealers are: Carl Bölken, Böving & Schröter, W. F. Fallenstein, Fried. Grave & Co., A. W. Gruner & Söhne, Gebrüder Kulenkampff, Joh. Lange Sohn's Witwe & Co., H. H. Meier & Co., Meyer & Strauch, Heinr. Neuberger, E. F. Schellhass Söhne, Friedr. M. Victor Söhne, D. H. Wätjen & Co., etc.

No complaint has been heard of regarding the packing of North American tobaccos. During the previous year, there was noticed a scarcity of "strong quality" Virginia tobaccos, and the offers of Maryland and Bay tobaccos were lacking in variety; especially Maryland was short on scrub, colored goods.

The prices of seed leaf being very high, very little was bought in the first half year (1898). Wisconsin tobaccos were preferred on account of soundness, brand, and size of leaf.

The larger part of the Connecticut harvest was rather light and inclined to mustiness. The few sound lots were sold at good prices.

GEORGE H. MURPHY, *Vice-Consul*.

BREMEN, *November 9, 1899.*

#### GERMANY'S TOBACCO CROP.

During the past two years, there has been a falling off in the cultivation of tobacco in Germany. In the crop year 1897, the area planted in tobacco amounted to 21,567 hectares (53,292 acres). In 1898 this was reduced to 17,652 hectares (43,608 acres), and it is estimated that in 1899 the area devoted to tobacco culture is only 14,643 hectares (36,183 acres). Thus in two years the falling off has amounted to 33 per cent. This year, 3,427 acres less have been planted in Baden than in 1898; 1,606 less in Prussia; 481 less in Württemberg, and 260 less in Alsace-Lorraine. The amount of the tobacco crop has also correspondingly declined. No reports have as yet been published in regard to the crop of 1899, but 28,000,000 pounds less was produced in 1898 than in 1897. In 1897, the crop was 99,000,000 pounds, while in 1898 it was 71,000,000. The average production per acre in 1898 (1,642 pounds) was less than in any year since 1888. This bad crop result no doubt hastened the decline of tobacco culture in Germany in 1899, so that the area was less than ever before—not half so large as twenty-five years ago. The total value of last year's crop was only \$6,000,000, over \$2,000,000 less than in 1897.

GEORGE H. MURPHY, *Vice-Consul*.

BREMEN, *December 11, 1899.*

## HAMBURG.

Although, as is well known, Hamburg is the principal trading center on the European continent, it is not the first tobacco market, and is by far outrivalled by Bremen, which is claimed to possess more favorable storing and other facilities for this trade.

The total imports of unmanufactured (leaf) tobacco into Hamburg during the year 1898 amounted to about \$15,775,150, of which some \$13,120,080 worth was reexported, so that the consumption of tobacco of all kinds in Hamburg was about \$2,665,070.

The direct imports of tobacco into Hamburg from the United States during the year 1898 amounted to about \$1,467,780, but, as no statistics as to the different kinds of such imports are obtainable, it is an impossibility to ascertain how much of Virginia, Carolina, Tennessee, Kentucky, Ohio, and other tobaccos of American growth have been imported.

In its last annual report (for the year 1898), the Hamburg Chamber of Commerce gives the following statistics of American tobacco imports into Hamburg:

| Kind.   | 1896. | 1897. | 1896. | 1896. | 1894. |
|---|-------|-------|-------|-------|-------|
| Seed leaf .....cases..                        | 2,000 | 6,000 | 4,500 | 3,200 | 3,500 |
| Kentucky, Virginia, Ohio, etc.....hogsheads.. | 5,200 | 2,800 | 2,200 | 3,300 | 4,500 |

In addition to these statistics, it is mentioned in the said report "that since the large steamship companies do not allow the ports of shipment of the goods imported to be given in the Hamburg list of imports, a paper issued at this city, this resolution renders it nearly impossible to issue accurate statistics, and therefore no responsibility for their correctness can be assumed."

It seems that only small quantities of "Virginia" and "Western" tobaccos are consumed in this city.

The two leading manufacturers of smoking tobaccos in Hamburg are the firms of Friedrich Justus and Joh. Wilh. von Eicken. According to its own statement, the annual consumption of "Virginia" and "Western" tobaccos of the first-named firm amounts to about 20 hogsheads of "Virginia" and 10 hogsheads of "Western," while the latter factory consumes about 60 to 80 hogsheads of "Virginia," 15 to 20 hogsheads of "Kentucky," and 25 to 30 hogsheads of "Burley" (Western) tobaccos.

With very few exceptions, all "Virginia" and "Western" tobaccos thus consumed at Hamburg are bought from Bremen importers, and the same are very seldom imported directly. As stated above, Bremen is said to possess more favorable facilities for the storing of tobacco than Hamburg, so that the consumers at the latter city prefer to buy

their tobacco from samples taken from goods actually lying in store than to order goods which are stored in America, or which have not even grown yet, from samples of an old crop.

The following firms are the principal importers of tobacco in Hamburg; none of them are manufacturers, but only dealers: David Jesurum; J. Robertson; H. N. Oettinger & Co.; C. Cohen & Co.; J. A. Kugelman; Mirow & Marcus; W. Capelle; J. Sandtmann, jr; Klein & Butschke; S. Wassermann; Julius Baetke; Joh. Hets; Philipp Baetke; J. A. Timmermann & Sne.; Ludw. Leop. Schmidt; Blothner & Grafe Nfl.; Schumacher & Kleeberg; Carstens & Viehmann; Ed. Hechscher & Co.; Langhaus & Jürgensen; Fontes, Friedrich & Kracht.

The following firms are manufacturers and sometimes also import tobacco, but only in very small quantities: A. F. A. Brandstrup & Sohn; Friedrich Justus; Joh. Wilh. von Eicken; F. W. Schröder; A. M. Eckstein & Söhne; J. N. G. Grapp Nfl.

Besides the manufacture of cigars and smoking mixtures for long pipes (heavy tobaccos), these factories produce smoking mixtures for short-stemmed pipes and cigarettes, manufactured from the light "Virginia" tobaccos, but, as the above statistics show, the consumption is not very large.

Nearly everybody here smokes cigars; only exceptionally is a man smoking a pipe seen on the street. The poor man, who can not afford to buy cigars, smokes a cheap "shag" of German growth, while cigarette smokers prefer Egyptian, Turkish, or Russian cigarettes. The peculiar flavor of American cigarettes, made of "Virginia" tobacco, does not please the German cigarette smoker; their odor is generally disliked.

It seems that lately Germans have taken more to the smoking of short-stemmed pipes than in former years. However, English and American smoking mixtures are generally preferred to those of German make, as the endeavors of German manufacturers to imitate English and American smoking mixtures were not entirely successful.

"Kentucky" tobacco is reexported to a great extent to West Africa; considerable quantities also go to Switzerland, where it is used for the manufacture of the so-called "Virginia" and "Vevey" cigars.

A very large amount of American tobacco is further consumed by the cigar and tobacco factories in the Rhine districts, at Duisburg, Mühlheim, Hanau, etc. However, most of this demand is supplied by Bremen, which in general reexports much larger quantities of tobacco than Hamburg.

HUGH PITCAIRN, *Consul.*

HAMBURG, *September 28, 1899.*

## ITALY.

## GENOA.

The total imports of tobaccos into the port of Genoa during the year 1898 (copied from the latest statistics available), with the countries of origin were:

| From—               | Leaf.          | Manu-<br>factured. |
|---------------------|----------------|--------------------|
|                     | <i>Pounds.</i> | <i>Pounds.</i>     |
| United States ..... | 7,767,502      | 183                |
| Brazil .....        | None.          | 70                 |
| Switzerland .....   | None.          | 397                |
| France .....        | None.          | 95                 |
| Germany .....       | None.          | 75                 |
| Greece .....        | None.          | 9                  |
| Netherlands .....   | None.          | 9                  |
| Russia .....        | None.          | 7                  |
| Austria .....       | None.          | 7                  |
| Spain .....         | None.          | 3                  |
| Total .....         | 7,767,502      | 856                |

I am informed that very little Virginia tobacco is imported into Genoa. All brought to this port, to Naples, and to Palermo is called Kentucky tobacco. Virginia tobacco is imported into Venice in large quantities.

The Italian Government imports and manufactures all the tobacco brought into Italy.

I can not learn that fault is found with the packing or quality of American tobacco. As about all the tobacco imported into Genoa comes from the United States, no comparison can be made between the packing and quality of the American product and those of other countries.

JAMES FLETCHER, *Consul.*

GENOA, *October 13, 1899.*

## LEGHORN.

In response to inquiries contained in Department circular, I submit the following brief report, the necessary information having been courteously supplied me by the local manager of the Government tobacco warehouse; this trade, as is generally known, being a Government monopoly, and therefore exclusively under its control.

Importations at Leghorn average between 40,000 and 50,000 quintals (9,000,000 to 11,000,000 pounds) each year. That received from Virginia and Carolina is classed as "Virginia." No Ohio tobacco is imported, but the larger percentage is received from Kentucky, it being safe to estimate the proportion as about 75 per cent of Kentucky and 25 per cent of Virginia. The term "Western" is not applied to the former, it being classed simply as "Kentucky." Shipments are made direct from New York, and no fault is found with either the

packing or quality. The Virginia is more especially adapted for cigarettes, being of lighter grade, and is almost entirely used for this purpose, the heavier Kentucky answering better for the cigars. The Italian cigar smoker is not content with anything but the strongest cigars, and the Kentucky tobacco furnishes him what he wishes.

JAS. A. SMITH, *Consul*.

LEGHORN, *October 13, 1899.*

## NETHERLANDS.

### AMSTERDAM.

The director of the custom-house at Amsterdam writes, under date of September 29, 1899:

In 1897, there was imported into the city of Amsterdam from the United States of America the following quantity of tobacco and cigars:

|           | Kilos.      | Pounds.      |
|-----------|-------------|--------------|
| 1897..... | 1, 140, 923 | =2, 510, 030 |
| 1898..... | 458, 010    | =1, 007, 622 |

These figures include tobacco in leaf as well as a small quantity of manufactured tobacco and cigars. It is impossible to furnish a separate statement of manufactured and unmanufactured tobacco or of Virginia and Western tobaccos.

Leaf tobacco is also imported via Rotterdam, the quantity being shown by Rotterdam statistics. A great deal of American tobacco is imported via Bremen and Hamburg. In the returns, this tobacco is put down as imported from these cities. The statistics of Amsterdam show that there were imported from Bremen, in 1897, 1,440,850 kilos, or 3,169,878 pounds; 1898, 1,448,237 kilos, or 3,186,121 pounds. From Hamburg, 1897, 404,865 kilos, or 890,703 pounds; 1898, 574,967 kilos, or 1,264,927 pounds. Most of these importations consisted of leaf tobacco.

I regret that values are not furnished by the custom-house here. The United States Treasury statistics also fail to aid, inasmuch as the Netherlands is included in that indeterminate term "Other countries."

Most tobacco importers here are dealers. The principal manufacturers are Herman Oldenkolt & Son, of Amsterdam, and Gebr. Noor-dyn, at Nymegen. The principal importers at Amsterdam are Oscar Rohte & Jiskoot, Gt. Jan Smit & Co., J. A. Kluytenaar, W. A. Van Hees, Herman Oldenkoot & Sons, B. W. de Jonge & Co., J. Lub, jr., G. Smitskamp & Co., Louis Bienfait & Son, and Laarman & Co.

Fault is not found with the packing or quality, though it is said that burley tobacco is sometimes in bad condition early in the season, which is attributed to bad packing. As a rule, Maryland tobacco is badly assorted. Better grades would bring higher prices if not mixed.

I am told that our people should not enter into relations with manufacturers in the Netherlands, as importers and dealers here are opposed to such action.

Bright Virginia is of no interest in this port. In many foreign countries, all Virginia and Carolina tobaccos are classed as Virginia,

while Tennessee, Kentucky, and heavy Ohio tobaccos are classed Western.

FRANK D. HILL, *Consul*.

AMSTERDAM, *September 30, 1899.*

### ROTTERDAM.

Most of the tobacco importers in this city are dealers, some, however, being manufacturers. The principal manufacturers are Louis Dobbelman, 106 Hoogstraat; Adrianus Egeter & Co., 224 Hoogstraat; A. van Herwaarden, 12 Westerstraat; Minderop & Sons, 81 Weste Wagenstraat; De Erven de Wed. J. van Nelle, 31 Leuvehaven; Adr. Joh. van Oordt & Sons & Co., 16 Groote Markt; J. and A. C. van Rossem, 16 Groote Markt; Schilte Bros., 8 Spaansche Kade; Zwartendyk Bros., 13 Open Rystuin.

The chief dealers in American tobacco are P. J. Cokart & Son, Hartlaub & Co., R. Kraemer & Co., Lohse Gerdt & Co., Rehm & Co., Gerd. van Rossem & Co., K. Schaedtler & Co., Jan van Schaik, and P. van Schaik & Co.

The principal tobacco brokers are P. Meerkamp van Embden & Sons, P. Gevers, jr., J. A. de Groot, Everard A. van Hees, J. M. Laurillard, Lukwel & Tiele, M. Merkelbach, R. P. R. van Riemsdyk, J. E. Rintel, R. Schuil, W. Soetmulder, J. J. Swaan, H. W. Wessels & Son, and J. Witgenstein.

The following tables show the imports and sales of leaf tobacco at Rotterdam for the year 1898, the imports during the last six years at Rotterdam, and the imports and sales in the Netherlands during the year 1898.

#### *Review of the tobacco trade for the year 1898.*

|                           | Maryland. | Virginia. | Kentucky' and<br>Mason County. | Java.   | Sumatra. | Borneo. | Manila. | Mexico. | Brazil. | Paraguay. | Grecian, Turk-<br>ish, etc. | Seed leaf. |
|---------------------------|-----------|-----------|--------------------------------|---------|----------|---------|---------|---------|---------|-----------|-----------------------------|------------|
|                           | Hhds.     | Hhds.     | Hhds.                          | Bales.  | Bales.   | Bales.  | Bales.  | Bales.  | Bales.  | Bales.    | Bales.                      | Bales.     |
| Stock January 1.....      | 486       | 68        | 116                            | 4,753   | .....    | 4,753   | 37      | .....   | .....   | .....     | 1,469                       | 60         |
| Imported in 1898....      | 6,151     | 274       | 236                            | 107,694 | 30,228   | 4,613   | 1,050   | 185     | .....   | 82        | 13,867                      | .....      |
| Total.....                | 6,637     | 342       | 352                            | 112,449 | 30,228   | 4,613   | 1,087   | 185     | .....   | 82        | 15,336                      | 60         |
| Sold in 1898.....         | 6,069     | 314       | 243                            | 106,696 | 30,228   | 4,613   | 522     | 49      | .....   | 82        | 13,409                      | 58         |
| Stock December 31, 1898.. | 568       | 28        | 109                            | 5,758   | .....    | .....   | 565     | 86      | .....   | .....     | 1,927                       | 7          |

#### IMPORTATIONS FOR THE LAST SIX YEARS.

| 1898..... | 6,151 | 274 | 236   | 107,694 | 30,228 | 4,613 | 1,050 | 185   | ..... | 82    | 13,867 | ..... |
|-----------|-------|-----|-------|---------|--------|-------|-------|-------|-------|-------|--------|-------|
| 1897..... | 7,597 | 780 | 1,960 | 81,567  | 24,942 | 8,046 | 924   | ..... | ..... | ..... | 9,827  | 226   |
| 1896..... | 5,030 | 798 | 3,115 | 51,265  | 26,268 | 1,068 | 614   | ..... | ..... | 120   | 12,664 | 489   |
| 1895..... | 4,080 | 386 | 1,564 | 74,461  | 19,395 | 629   | ..... | 45    | ..... | ..... | 13,665 | 1,233 |
| 1894..... | 5,232 | 439 | 842   | 83,448  | 13,473 | 576   | 657   | ..... | 150   | 2,192 | 5,491  | 500   |
| 1893..... | 2,766 | 239 | 456   | 87,358  | 9,031  | 668   | 600   | ..... | 2,012 | 200   | 3,108  | 2,015 |

*Review of the tobacco trade for the year 1898—Continued.*

## IMPORTS AND SALES IN THE NETHERLANDS IN 1898.

|                     | Maryland. | Virginia, Kentucky and Mason County. | Java.    | Sumatra. | Borneo. | Molucca. | Menado. | Mexico. | Manila. | Grecian, Turkish, and Trebizonde. | Seed-leaf cuttings. | Paraguay. |
|---------------------|-----------|--------------------------------------|----------|----------|---------|----------|---------|---------|---------|-----------------------------------|---------------------|-----------|
|                     | Hhds.     | Hhds.                                | Bales.   | Bales.   | Bales.  | Bales.   | Bales.  | Bales.  | Bales.  | Bales.                            | Bales.              | Bales.    |
| Total imports ..... | 8, 671    | 550                                  | 299, 334 | 200, 094 | 17, 423 | .....    | 493     | 4, 947  | 4, 158  | 16, 624                           | 166                 | 2, 737    |
| Total sales .....   | 8, 554    | 620                                  | 286, 548 | 200, 094 | 17, 423 | 141      | 493     | 4, 262  | 3, 922  | 15, 791                           | 209                 | 2, 737    |

The packing of American tobaccos has of late years been very satisfactory; there are no complaints whatever. All the tobaccos imported here are packed in cases or bales, with the exception of American tobaccos, which are packed in hogsheads. The only American tobacco packed in cases in this market is seed leaf, and packing compares very favorably with that from other countries. The qualities are always according to the samples on which the goods are purchased.

Though there is always considerable trade in American tobacco in the Netherlands, sales are influenced somewhat by quotations. It frequently happens, as it did during 1897, that the manufacturers lay in a large stock of American tobacco when the article is low in price, so as to be provided when prices are going up again.

In my report on "Commerce and Industries" for 1898 and the first six months of 1899,<sup>1</sup> I wrote the following upon American tobacco:

In 1898, less was done in American tobacco than had for some years been the case. On account of the rise in prices of burley tobacco, next to nothing was imported. The manufacturers here had provided themselves so well the year before, while prices were low, that they could in 1898 even dispose of some of their stock at a good profit.

The large quantity of common Maryland tobacco, which had found its way into the Netherlands when prices were high, was pretty well all sold at the beginning of the year. Consumers being thus supplied, there was little chance of important transactions. For some time deals were limited to sunburnt, which was imported early in the year and rapidly sold on account of the lack of good colored tobacco in the market. Business in good Maryland tobacco was limited during the first half of the year, owing to the high quotations in the United States. Ultimately, some importations were made at lower figures.

In seed-leaf tobacco, there was little movement; direct importations were few, but several lots were purchased from neighboring markets. Prices for wrappers and fillers being higher in the United States, were also higher here. In consequence thereof, deals were made with difficulty and were not as important as usual.

Mr. J. M. Laurillard, a leading Rotterdam tobacco broker, informs me that the following quantities of American tobacco have arrived at Rotterdam during the first half of the present year (1899): Maryland, 1,800 hogsheads; Virginia, 300 hogsheads; Kentucky and Mason County, 700 hogsheads; seed leaf, 590 cases.

Prices (for that period) were higher than last year, about 20 per cent for all grades. At present, there is a good demand for colored tobaccos, for which the trade pays fair prices. The stock is very small. Kentucky tobacco is rising in price.

<sup>1</sup>See Commercial Relations, 1899, Vol. II.

Since the foregoing was written, colored Virginia tobaccos have gone up considerably in price, being offered at present at from 8 to 16 cents per pound.

Prices for Kentucky tobacco are at present 4.8 cents for ordinary, for average quality about 7.2 cents, and for better qualities about 10.8 cents.

Very little burley tobacco is imported at present on account of the high market in the United States; dealers and manufacturers claim that they can not pay the prices asked.

The total annual importation of bright Virginia tobacco, which is also used for the manufacture of cigarettes, is estimated to be about 100 hogsheads.

There are but few cigarette manufacturers in the Netherlands, as cigarettes are not smoked to such an extent as cigars, and the manufacturers use principally Grecian and Turkish tobacco.

S. LISTOE, *Consul.*

ROTTERDAM, *December 29, 1899.*

## RUSSIA.

### ST. PETERSBURG.

The latest official statistics contain data only for 1897, and state that 778 tons of leaf tobacco, valued at \$884,115, were imported into Russia in that year from the following countries:

| Countries.                 | Quantity. | Value.    |
|----------------------------|-----------|-----------|
| Austria-Hungary.....tons.. | 13        | \$16, 276 |
| Belgium.....pounds..       | 1, 440    | 621       |
| Brazil.....do.....         | 36        | 13        |
| Great Britain.....tons..   | 4         | 3, 497    |
| Germany.....do.....        | 151       | 162, 796  |
| Holland.....do.....        | 15        | 16, 709   |
| Greece.....do.....         | 54        | 63, 522   |
| Denmark.....pounds..       | 180       | 75        |
| Italy.....tons..           | 1         | 1, 031    |
| China.....do.....          | 4         | 344       |
| Norway.....pounds..        | 72        | 17        |
| Persia.....do.....         | 36        | 3         |
| United States.....tons..   | 8         | 11, 923   |
| Turkey.....do.....         | 520       | 601, 243  |
| France.....do.....         | 1         | 1, 021    |

The total amount of leaf tobacco imported from abroad during 1898 was 823 tons, valued at \$874,985. The statistics do not show the proportion of "Virginias" and "Western" tobacco in the amount imported, as no American tobacco is brought into Russia by any of the dealers or manufacturers. The 8 tons mentioned above are said to have been imported by private parties.

Both manufacturers and dealers of tobacco in St. Petersburg are importers of foreign tobacco.

The principal importers are: Laferme, Vassili Ostrov, 9th line No. 36; Saatchi & Mangoubi, Degtiarnaia No. 7; Chapchal Bros., Perekupnoi No. 13; Ad. Schopfer, Chernyshev per. No. 22.

There is no trade in American tobacco.

W. R. HOLLOWAY,  
*Consul-General.*

ST. PETERSBURG, *October 24, 1899.*

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### ODESSA.

The total imports of unmanufactured (leaf) tobaccos into the port of Odessa have varied but little in recent years. In 1896, the quantity was 189 tons; in 1897 it was 162 tons; in 1898 it was 170 tons, and in 1899, 175 tons. These figures do not include large quantities of tobacco passing through the Odessa custom-house to be cleared at inland custom-houses. There are no statistics available which give the quantities of tobacco thus sent inland. All or nearly all of this tobacco comes from Turkey. Virginia and Carolina tobaccos, which are known or classed as "Virginias," and Tennessee, Kentucky, and heavy Ohio tobaccos, which are classed as "Western," are not known in this market, nor are they imported here.

The principal importers of tobacco at this port are dealers only. The names of the principal importers of tobacco at this port are as follows: Stucken & Co., Ashkinazy, Asvadurov, Popov, Vahovski, and Vaingurt.

Some years ago, a consignment of American tobacco was received at this port, and I remember that it was returned to the United States, being carried by the *Volunteer* fleet steamer to Nagasaki, thence to San Francisco. It will thus be seen that American tobacco has not as yet found favor in this market.

THOS. E. HEENAN, *Consul.*

ODESSA, *March 14, 1900.*

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### SPAIN.

#### MALAGA.

No tobacco is imported at Malaga. The entire trade of the Kingdom of Spain is in the hands of the Compañia Arrendataria de Tabacos, a monopoly from which it would be next to impossible to secure statistics.

The cultivation of the tobacco plant in Spain is prohibited, and in order to enforce this law, this company maintains a navy of its own and a large body of troops, who annually destroy many thousands of plants surreptitiously grown.

R. M. BARTLEMAN, *Consul.*

MALAGA, *September 14, 1899.*

## VALENCIA.

Information on the American tobacco export trade is not obtainable here, the importation and manufacture of tobacco being a monopoly, with headquarters at Madrid, at which place the tobacco is purchased, to be stored at Santander, in the north of Spain, and issued to the various manufacturers in amounts desired.

In this connection, I beg to refer to the report by Mr. F. Mertens, late consular agent at Grao, under date of August 18, 1899,<sup>1</sup> and to state that that gentleman is willing to represent American exporters at Madrid, and seems confident of being able to effect sales.

HORACE LEE WASHINGTON, *Consul*.

VALENCIA, *October 10, 1899.*

## SWEDEN.

## STOCKHOLM.

The Government of Sweden in making up its statistics does not classify the imports of tobacco as Virginia or Western. I may say that the majority of the tobacco imported comes through German merchants and from their warehouses. Buying direct from America is somewhat of an experiment, but the practice has taken root and shows signs of a great increase. The goods are brought to the consumer cheaper and commissions are saved, but the buyer tells me he runs a greater risk. Tobacco is a dangerous commodity to handle. The long voyage across the Atlantic may cause it to dry out, and the shortage in weight may be a large item. A purchase in Bremen, Hamburg, or some other continental city may cost more, but the goods are likely to be up to sample, shortage in weight is more readily adjusted, and a trip to the Continent once a year to place orders does not seem such an effort as a journey to America.

Our merchants can overcome all these objections very easily and do all the business. A few traveling men are needed (not necessarily speaking the language), and an agent that can adjust claims. No goods not strictly in conformity with the sample that brought the sale should leave for Swedish ports. The tobacco should be properly stored on the ship; great care should be taken with the weighing, and prices should be quoted C. I. F. in Stockholm or some other Swedish port, in the currency of the Kingdom. Tobacco merchants here want to trade with us; they ask no credits, but are willing to pay only on delivery. Other merchants sell on these conditions. The small business

<sup>1</sup>See Consular Reports No. 230, November, 1899; Advance Sheets No. 532, September 19, 1899.

that has been done with America direct has in most cases involved paying the purchase money in the United States against bill of lading. No merchant wants to pay for his goods "unseen," especially tobacco.

The import of tobacco into this Kingdom for the year 1898 was 3,959,000 kilograms (8,728,011 pounds), one-quarter of which is said to be from the United States.

From the statistics at hand, I find that in 1898 there were manufactured:

|                       |             |           |
|-----------------------|-------------|-----------|
| Cigars .....          | 131,000,000 |           |
| Cigarettes .....      | 22,000      |           |
|                       | Kilograms.  | Pounds.   |
| Smoking tobacco ..... | 419,000=    | 923,727   |
| Chewing tobacco ..... | 894,000=    | 1,970,912 |
| Snuff .....           | 4,424,000=  | 9,753,150 |

The value of the above was 14,820,138 crowns (\$3,971,797).

The importers of tobacco are, as a rule, manufacturers as well. They generally buy from importers in Bremen.

The names of the principal importers in this district are as follows: Jac. Fr. Ljunglöf, Stockholm; Brinck, Häfström & Co., Stockholm; W. Hellgren & Co., Stockholm; Fick & Co., Stockholm; Cigarrfabriken Skandinavien, Stockholm; Bergman & Gösling, Stockholm; P. C. Rettig & Co., Gefle.

E. D. WINSLOW, *Consul-General*.

STOCKHOLM, *October 7, 1899.*

### GOTHENBURG.

In the year 1897, there were 93 tobacco factories in Sweden, employing 4,380 persons, and the value of their total production of cigars, cigarettes, snuff, and different kinds of tobacco amounted to \$3,971,797.

The development of the tobacco industry in Sweden since the year 1830 may be learned from the following table:

| Year.      | Number of factories. | Value of production. | Year.      | Number of factories. | Value of production. |
|------------|----------------------|----------------------|------------|----------------------|----------------------|
| 1830 ..... | 77                   | \$334,521            | 1870 ..... | 97                   | \$1,731,898          |
| 1840 ..... | 84                   | 426,000              | 1880 ..... | 104                  | 2,813,917            |
| 1850 ..... | 86                   | 579,969              | 1890 ..... | 85                   | 2,866,155            |
| 1860 ..... | 108                  | 1,224,798            | 1897 ..... | 93                   | 3,971,797            |

The production of cigars and cigarettes during the year 1897 was as follows:

|                  |          |             |
|------------------|----------|-------------|
| Cigars .....     | pounds.. | 1,443,107   |
| Cigarettes ..... | do....   | 47,829      |
| Value .....      |          | \$1,655,655 |

a 130,917,879 in number.

The following table shows the increase in the manufacture of cigars since the year 1830:

| Year.     | Production.    | Year.     | Production.    |
|-----------|----------------|-----------|----------------|
|           | <i>Pounds.</i> |           | <i>Pounds.</i> |
| 1830..... | 132            | 1870..... | 495,122        |
| 1840..... | 17,838         | 1880..... | 1,131,767      |
| 1850..... | 145,973        | 1890..... | 851,818        |
| 1860..... | 457,285        | 1897..... | 1,443,107      |

The principal centers of the cigar industry are Stockholm, Malmö, Gothenburg, and Gefle. The following table shows the number of cigars manufactured during the year 1897 at the most important places:

|   |                        |
|---|------------------------|
| In Stockholm, about.....                              | 45,000,000             |
| In Malmö, about.....                                  | 24,500,000             |
| In Gothenburg, about.....                             | 20,000,000             |
| In Gefle, about.....                                  | 12,500,000             |
| In Helsingborg, Ystad, and Linköping, each about..... | 3,000,000 to 4,000,000 |
| In Norrköping and Carlskrona, each, about.....        | 2,000,000 to 3,000,000 |

The principal places of the cigarette industry are Stockholm and Gefle, small quantities being also manufactured in Charlottenberg and in Gothenburg.

#### IMPORT AND EXPORT.

Cigarettes are imported from several countries, but principally from the United States. The import of cigars and cigarettes seems to be on a more marked and steady increase than the import of tobacco in other forms.

The import of tobacco and manufactures thereof during the year 1897 was as follows:

| Description.               | Pounds.   | Value.      |
|----------------------------|-----------|-------------|
| Tobacco, raw.....          | 8,195,483 | \$1,793,297 |
| Smoking tobacco, etc.....  | 57,996    | 21,152      |
| Cigars and cigarettes..... | 286,730   | 348,561     |
| Total.....                 | 8,540,209 | 2,163,010   |

The export of tobacco was of little importance, as can be seen in the following table:

| Description.               | Pounds. | Value. |
|----------------------------|---------|--------|
| Tobacco, raw.....          | 64      | \$14   |
| Snuff, etc.....            | 24,928  | 9,091  |
| Cigars and cigarettes..... | 1,664   | 2,023  |
| Total.....                 | 26,656  | 11,128 |

According to official statistics, raw tobacco was imported from the following countries in the order named, viz: Germany, England, Denmark, the Netherlands, Norway, the United States, Finland, and Belgium; Germany being far ahead of any of the other countries. I understand that a great deal of tobacco is imported from Bremen.

Smoking tobacco, etc., was imported (1897) from Denmark, England, Germany, Norway, the Netherlands, Finland, Belgium, Russia, and France.

Cigars and cigarettes were imported from Germany, Denmark, the Netherlands, Finland, Belgium, England, Norway, France, Russia, and Spain.

That this division of the import as to the countries of origin is defective can be seen at the first glance, because the statistics do not give any return for import of manufactured tobacco from the United States, while everybody here knows that considerable quantities of American smoking tobacco and cigarettes are consumed in Sweden. This is accounted for by the fact that merchandise is entered at the custom-houses as coming from the respective countries from which it was last shipped, and very few vessels come here direct from the United States.

#### DUTY.

The import duty on raw tobacco, leaves, and stalks is 1 krona per kilogram (about 12.2 cents per pound). The duty on cigars and cigarettes is 4 kroner per kilo (about 48.6 cents per pound); and the duty on other kinds of manufactured tobacco is 1.20 kroner per kilogram, or about 14.6 cents per pound.

The duty on cigar and cigarette machinery is 10 per cent ad valorem.

Sweden has no law to the effect that imported goods shall have marks of origin. The customs regulations say, however, that merchandise produced or manufactured in foreign countries and imported into Sweden shall not be marked with name of place, estate, industrial establishment, or tradesman within Sweden, and shall not have other marks which can give the goods the appearance of having been manufactured in Sweden. The above prohibition does not apply to cases "when it is indicated in a plain and conspicuous way that the goods are of foreign production, or when it is otherwise plain that no deception by wrong marks of origin is intended." If such wrong or deceptive marks of origin are placed on the goods or casings, the goods will be seized.

There is no Government monopoly of the cigar and cigarette trade.

ROBERT S. S. BERGH, *Consul*.

GOTHENBURG, *August 25, 1899.*

## NORWAY.

The Norwegian official statistics make no distinction between the two classes of leaf tobacco entitled "Virginia" and "Western."

The total imports of leaf tobacco into Norway in the year 1898 were as follows:

| Countries.                   | Kilograms. | Pounds.   |
|------------------------------|------------|-----------|
| From Denmark .....           | 980        | 2,161     |
| From Germany .....           | 1,158,650  | 2,554,360 |
| From Holland .....           | 32,490     | 71,627    |
| From Great Britain .....     | 89,270     | 196,805   |
| From the United States ..... | 534,650    | 1,178,639 |
| From other countries .....   | 40         | 88        |
| Total .....                  | 1,816,080  | 4,003,730 |

One of the Christiania tobacco manufacturers informs me that of the above importations, about one-third is "Virginia," or light tobaccos, and the balance "Northern," the first being used for smoking tobaccos and cigars, and the latter also for the same purposes, but principally for chewing tobaccos.

Of the imports from Germany and Great Britain, a large portion is American tobacco, originally bought from our exporters by jobbers in those countries, who again make sales to Norwegian manufacturers and dealers. Norway has no customs regulations requiring imported goods to be marked so as to show country of origin, and all goods entered are set down as imports from the country from which they come.

The importation of cigars and cigarettes into Norway in the year 1898 was 141,010 kilograms (310,890 pounds), of which 7,460 kilograms (16,446 pounds) came from the United States and nearly all of the balance from Holland and Germany.

The import duty on tobaccos and cigars into Norway is as follows: Leaf tobacco, 47 cents per kilogram (2.2046 pounds); cigars and cigarettes, 96 cents per kilogram; smoking and chewing tobacco, 56 cents per kilogram.

The importers of tobacco at Christiania are manufacturers and dealers. The principal ones are: Conrad Langaard, Skippergaden 27; Tiedemanns Tobakhsfabrik, Falbes Gd. 1; William Lütz, Stargaden 10\*; Wilhilmsen Co., Calmeyer Gd. 13; Carl F. Johannesen, Karl 12<sup>tes</sup> Gd. 4; M. Glott, Toldbodgaden 22; F. H. Dethloff, Skippergaden 17.

No fault is found with American tobaccos, either with regard to quality or packing.

German and Dutch traveling salesmen in this line visit the Norwegian cities quite frequently, carrying samples and soliciting trade. I am informed that, as samples of leaf tobacco, they often carry leaves

from each of the hogsheads or lots carried in stock, so that the buyer is enabled to make his choice as well as if he were at the warehouse in person.

From the German merchants, tobacco is bought by merchants here on open account and on from three to four months' time, if required.

HENRY BORDEWICH, *Consul.*

CHRISTIANIA, *October 4, 1899.*

## SWITZERLAND.

### BERNE.

After due investigation, I have to report that the import of tobaccos from the United States is not classified in the statistics by the names "Virginia" and "Western." Only the entire import from the different countries is given.

Inclosed herewith I send a table showing whence the tobaccos imported into Switzerland came during the year 1898, and giving the average value per quintal (220.46 pounds).

The names of the largest manufacturers of tobacco in Switzerland are: Vautier Freres et Cie., Grandson; Burrus, F. J., Boncourt; Maison Ormond, Vevey; Trueb, Rudolph, Basle; Diehl, Gageur & Co., Basle; Taverney, H., Vevey; Ermatinger, Th., Vevey.

I hear of no fault found with the method of packing.

ADOLPH L. FRANKENTHAL, *Consul.*

BERNE, *October 18, 1899.*

*Import of unmanufactured tobacco (leaf, stems) into Switzerland, 1898.*

| From—                 | Number of quintals. | Value.    | Average value per quintal. |
|-----------------------|---------------------|-----------|----------------------------|
| United States.....    | 37,415              | \$707,667 | \$18.914                   |
| Dutch Indies.....     | 9,201               | 461,706   | 50.18                      |
| Brazil.....           | 6,687               | 158,748   | 23.739                     |
| Austria.....          | 3,049               | 25,892    | 8.492                      |
| Germany.....          | 1,838               | 19,510    | 10.615                     |
| Central America.....  | 1,328               | 46,135    | 34.74                      |
| La Plata.....         | 849                 | 10,651    | 12.545                     |
| Algeria.....          | 461                 | 5,292     | 7.141                      |
| Turkey in Europe..... | 385                 | 5,573     | 14.475                     |
| Turkey in Asia.....   | 299                 | 4,328     | 14.475                     |
| British Indies.....   | 110                 | 748       | 6.755                      |
| Columbia.....         | 97                  | 1,497     | 15.44                      |
| Greece.....           | 58                  | 840       | 14.475                     |
| East Asia.....        | 45                  | 1,568     | 34.74                      |
| Russia.....           | 42                  | 421       | 10.036                     |
| Netherlands.....      | 39                  | 753       | 19.30                      |
| West Africa.....      | 4                   | 31        | 7.72                       |
| East Africa.....      | 3                   | 23        | 7.72                       |
| Total, 1898.....      | 61,910              | 1,449,369 | 23.353                     |
| Total, 1897.....      | 68,530              | 1,631,350 | 23.739                     |
| Difference, 1898..... | 6,620               | 181,981   | .....                      |

**ST. GALL.**

No industry in this branch of business exists in the consular district of St. Gall, and unmanufactured tobacco is neither imported nor sold.

During the past two years, the imports of unmanufactured tobacco and tobacco sauce into Switzerland were in value as follows:

| From—   | 1897.     | 1898.     |
|---|-----------|-----------|
| United States of America.....                 | \$716,232 | \$707,667 |
| Germany.....                                  | 12,589    | 19,511    |
| Austria-Hungary.....                          | 20,427    | 25,892    |
| Holland (Europe).....                         |           | 752       |
| Holland (colonies).....                       | 592,915   | 461,706   |
| Turkey (Europe).....                          | 6,511     | 5,573     |
| Turkey (Asia), Arabia, Persia, Turkestan..... | 7,741     | 4,327     |
| Algeria, Tunis, Tripoli, Morocco.....         | 5,734     | 3,292     |
| Japan, China.....                             | 4,829     |           |
| Mexico, Central America, West Indies.....     | 50,910    | 46,135    |
| Brazil.....                                   | 199,194   | 158,741   |
| Argentina.....                                | 5,407     | 10,651    |

The two articles mentioned and different grades of tobacco are not given separately in the Swiss Government's statistics.

JOSEPH SIMON,

*Vice and Deputy Consul-General.*

ST. GALL, *September 18, 1899.*

**TURKEY.**

In answer to the Department's circular instruction of August 30, 1899, it is sufficient to report that the tobacco industry in Turkey is a monopoly, the import of unmanufactured tobacco being prohibited. Only cigars and plug chewing tobacco are admitted, and upon these two articles 75 per cent duty is imposed.

CHAS. M. DICKINSON,

*Consul-General.*

CONSTANTINOPLE, *November 23, 1899.*

**UNITED KINGDOM.****LIVERPOOL.**

Tobaccos from the United States are classified here as "Virginias" and "Western," leaf and strips. All tobaccos from Virginia, the Carolinas, and "Brights" from Tennessee come under the first-named class; all others are "Western." Tobacco with the stems removed is called strips; all others leaf.

The imports of unmanufactured tobacco into Liverpool during the year 1898 were:

|                       | Hogsheads<br>and tierces. |
|-----------------------|---------------------------|
| Virginia leaf .....   | 9, 562                    |
| Virginia strips ..... | 24, 863                   |
| Western leaf .....    | 7, 854                    |
| Western strips .....  | 9, 785                    |
| Other sorts .....     | 67                        |
| Total .....           | 52, 131                   |

The yellow tobacco from southern Virginia and the Carolinas is packed in casks weighing about 800 pounds; the "Western" and dark in hogsheads of about 1,200 pounds weight.

The importers of tobacco are not manufacturers, but generally commission merchants. Manufacturers import direct on their own account, but not to any extent. The bulk of the tobacco shipments is consigned here to merchants for sale on account of the American shipper.

The principal importers are: Edward Samuelson & Co., 22 Sir Thomas street; J. K. Gilliat & Co., 31 North John street; Robert Kerr & Son, 19 Hanover street; T. H. Edwards & Co., 27 Gradwell street; Macleod, Reid & Co., 20 South John street; W. A. & G. Maxwell, 63 South John street; J. C. Muller & Co., 24 Dale street.

After making careful inquiry, I learn that no complaint is made in Liverpool in regard to the packing or qualities of American tobaccos shipped to this market. Of course, there are cases where inferior tobacco is put up and carelessly handled, but the most reliable houses in the United States endeavor to please the market here with carefully selected tobacco. The packing is a matter of experience, and one of the largest importers here remarks, in this connection, that "most of the American shippers have nearly arrived at perfection." The quality of tobacco depends upon the crops, which lately are said to have been poor, but it is held that if farmers paid more attention to quality than to quantity, it would be beneficial financially all round. There is the impression here that more is planted than the farmers are able to cultivate, which results in inferior quality and a poorer money return to themselves.

There is very little foreign unmanufactured tobacco now competing in this port with American, but prior to May 16, 1898, Java, Japan and Paraguay tobaccos were used as "substitutes" for North American tobacco, because they absorbed more water. On the date named a law came into operation (61 and 62 Victoria, chap. 10) restricting the moisture in manufactured tobacco to 30 per cent. Since then the use of "substitutes" is dying out. There are occasions, however, when "China" (a yellow tobacco), being cheap and plentiful, is used to mix with bright Virginia and Carolina tobaccos in order to reduce the cost, but at the present time "China" tobacco is poor and dear.

When "Virginias" and "Western" tobaccos are packed in a condition sufficiently dry to meet the requirements of this country, viz, when they arrive containing not more than 14 per cent, or less than 10 per cent of moisture, there is practically no tobacco to compete with them.

W. J. SULIS,

*Vice and Deputy Consul.*

LIVERPOOL, *September 20, 1899.*

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BELFAST.

Ireland depends on the foreign supply for the large quantities of tobacco consumed. Owing to the fact that nearly all the tobacco for this consular district is first shipped to Liverpool and Glasgow and reshipped to this port, it is impossible to give exact statistical information as to the proportion of unmanufactured tobacco which arrives here from the United States. But from careful investigation and diligent inquiry, it is safe to say that nearly the whole supply received here by the manufacturers comes from the United States. According to the report of the harbor commissioners of Belfast, there were received at this port from the 30th of June, 1898, to the 30th of June, 1899, 3,518 tons of unmanufactured (leaf) tobacco. I am unable to state the exact amount and proportion of Virginia and Western tobacco received, but a careful estimate of those engaged in the manufacture of tobacco places the amount of Western received at about 15 per cent in excess of Virginias.

The importers of tobacco into this consular district are both manufacturers and dealers, but the statistics which I have quoted refer entirely to unmanufactured tobacco.

The names of the importers in this district are: Wm. Clarke & Son; Gallaher, Limited; W. H. Milligan & Co.; Murray, Sons & Co.

No fault has been found with the packing or qualities of American tobacco. It is preferred to all others. One dealer said that his firm was using all it could handle, and that it was far superior to any other tobacco of which he had knowledge, with the exception of Habana tobacco for the manufacture of cigars. The Virginia tobacco is used exclusively in the manufacture of cigarettes, and the demand for it is increasing. The Western is used principally in the manufacture of smoking tobacco, although I am advised by some of the manufacturers that it is used to a limited extent in the manufacture of cigarettes.

It would seem, so far as this consular district is concerned, that no particular suggestions could be made that would increase the sale of American tobacco. Care should be exercised in packing, and the tobacco should be put up in uniformly dry condition.

WILLIAM W. TOUVELLE, *Consul.*

BELFAST, *November 14, 1899.*

## TOBACCO CULTIVATION IN IRELAND.

Consul Halstead, of Birmingham, February 10, 1900, writes:

The London Daily Mail is responsible for the statement that the efforts for tobacco cultivation by the Irish Agricultural Organization Society in experiments at Donaghpatrick, in the county of Meath, are so successful that an endeavor may be made to have certain legislative restrictions upon tobacco growing removed. Two 49-square-yard plots, one in the middle of a turnip field and one in an old garden, the soil of both clay loam, were selected and no artificial manure was used.

The crop was cut on September 29, the leaves dried and expertly fermented, the crop weighed, duty paid, and the leaves forwarded to a manufacturer, who made them into flake and plug. The experts pronounced the tobacco a serviceable article. The turnip plot yielded 14 pounds 12 ounces, the garden plot 20 pounds 12 ounces, and this 35 pounds of leaf produced 33 pounds of tobacco, figuring for the average produce per statute acre at 1,681 pounds. The matter is considered of such importance that Mr. William Redmond, M. P., has given notice that he will ask a question on the subject in Parliament.

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Under date of February 14, 1900, Mr. Halstead adds:

On the day following the announcement by the London Daily Mail that experiments in tobacco growing had been made in Ireland, the London Morning Leader, under the caption "A 'vision' dispelled, cheap home-grown tobacco that will be fit for cigarettes," prints the following article, which does not present so rosy a view of the possibilities of tobacco culture in Ireland:

On Thursday it was announced that tobacco had been produced, including manufacture, at 4d. (\$0.08) per pound at Donaghpatrick, in the county of Meath, where the local agricultural society has successfully carried out experiments in tobacco cultivation. It was stated that with the addition of duty at 2s. 4d. (56.7 cts.) the tobacco could be sold at 4s. (97 cts.) a pound, and thus realize a profit of at least 1s. (24 cts.) per pound.

Inquiries made at Messrs. W. D. and H. O. Wills's factory, at Bristol, reveal the fact that the figures are altogether unreliable, and "must," according to our informant, "have been compiled by someone who knows nothing about tobacco growing."

At present, Messrs. Wills have not had any of this specific tobacco offered to them, but they are not staggered at the price that it is alleged to be offered at, as they themselves turn out tobacco at 3s. 4d. and 3s. 6d. (81 cts. and 85 cts.) per pound to shopkeepers. This, of course, is pipe tobacco, of coarse and strong flavor, and not at all fit for cigarette smoking.

It is quite possible that tobacco plants have been grown to great size in the south of Ireland, but it is scarcely likely that the leaf would be of the flavor and grain suitable for cigarettes. To quote expert opinion, "it would not be fit to compare with the commonest workman's shag."

Mr. T. R. Seymour, a prominent member of the Bristol Tobacconists' Association, and leading retailer, doubts the "vision." He says he has seen tobacco that has

been grown in Britain before and has tried it, but usually finds that it is coarse, rank stuff. His customers have also tried it as a novelty, but have not persistently purchased it.

A British-grown tobacco would be welcomed, but at present in price and quality it will not compare with American and other varieties.

However, the *Daily Mail*, in an issue of February 13, touches the subject again as follows:

The recent experiments in tobacco growing in Ireland, to which reference was made in the *Daily Mail* a few days ago, were the subject of a question yesterday in the House of Commons.

Mr. Plunket, in reply to Mr. Redmond as to the results achieved and whether the agricultural department of Ireland intended to take steps to encourage the industry, said experiments had been conducted for two years, showing that tobacco plants would grow luxuriantly in Ireland. The plant experimented with was the variety known as English Virginia. [Laughter.] The tobacco had been manufactured, and was found to contain an abnormal amount of moisture and also of nicotine. [Laughter.]

This Irish sample was nearly twice as strong as the strongest tobacco sold, and therefore for some purposes it would be quite as good. The net profit per acre was £172 (\$837).

It was proposed to continue the growing of tobacco in Ireland, but with a finer quality of plant, and it would be the duty of the department to give what assistance might be necessary.

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#### GLASGOW.

Practically all the tobacco that comes to this district is imported from America. The importers are all dealers. No fault is found with the packing or qualities, so far as I can ascertain. The only other tobacco that comes here is from Turkey, but the amount is very limited and it is used entirely for cigarettes. The quantity of tobacco imported into the district in 1898 was 833 hogsheads (of which 800 hogsheads were "Western" and 33 "Virginia") and 970 tierces (all "Virginia"). In 1899 (from January until this date) there were imported 3,765 hogsheads (of which 3,750 were "Western" and 15 "Virginia") and 498 tierces (all "Virginia"). The importers are A. & J. Gilmour, 10 Bothwell street; Faulds & Watson, 111 Union street; T. G. Holt, 25 Wellington street; Alexander McEwen, 20 Dixon street; F. & J. Smith, 107 Argyle street; Robert T. Randall, 21 Argyle street; Gilbert Cochrane & Co., 233 St. Vincent street.

SAMUEL M. TAYLOR, *Consul*.

GLASGOW, *October 13, 1899.*

## AMERICA.

## DOMINION OF CANADA.

## QUEBEC.

The records of the custom-house in Quebec show that there were imported from the United States from January 1 to June 30, 1899, 62,028 pounds of leaf tobacco, valued at \$7,481. The returns do not show whether it was "Virginia" or "Western."

Most of this leaf was used by manufacturers. The names of the latter are: H. D. Barry, 155 D'Aiguillon street; Quebec Cigar Manufacturing Company, 373 St. Joseph street; American Tobacco Company, 22 St. Peter street; Honore Blouin, 146 St. Paul street; Joseph Cote, 177 St. Joseph street; B. Houde & Co., 63 Dalhousie street; Quebec Fruit Exchange, 31 St. Peter street; The Rock City Tobacco Company, corner Dorchester street; Eagle Tobacco Works, St. Andre street; Lemesurier & Sons, 237 St. Paul street; Miller & Lockwell, 133 St. Peter street.

I hear of no fault found with the packing or quality. I am unable to suggest anything that would tend to increase the sale of American tobacco here, except a reduction of the tariff. I am sure there is much more tobacco grown in this province than formerly. Thirty years ago, it was a rare thing to pass a farm here where the "weed" was cultivated, while now it is rare to see one without a patch of tobacco, from a few rods square to several acres, which is mostly used for smoking by the farmers.

WM. W. HENRY, *Consul.*

QUEBEC, *September 8, 1899.*

## BRITISH COLOMBIA.

Manufacturers and importers of tobacco here say they know of no such classes as "Virginias" and "Western" among the American tobacco imported here.

The total imports of unmanufactured (leaf) tobacco into the port of Victoria during the six months ended June 30, 1899, were 30,161 pounds, of the reported value of \$12,705. About 15 per cent of this leaf tobacco was grown in Cuba, and 10 per cent in Sumatra. The remaining 75 per cent was American grown, and was principally bought in the markets of Chicago, St. Louis, and Cincinnati. It comes labeled with the packers' names, and is reported to be raised in Virginia and Ohio.

All the importers of tobacco in Victoria are manufacturers. Some are both manufacturers and dealers. The principal importers in Victoria are Thomas Gold, Province Cigar Company, A. Bantley, A. Schuoter, Mease & Lowden, H. E. Levy, M. Levy, On Hing, E. A. Morris, and H. L. Salmon.

No fault is found with the packing of the tobacco imported from the United States. Complaint is made, however, that occasionally the tobacco delivered is not up to the sample from which purchase was made.

The importations of tobacco (other than leaf) at this port from outside of Canada during the first six months of 1899 were as follows: Cigarettes, 672 pounds, valued at \$1,297, all from Great Britain; cigars, 3,032 pounds, valued at \$13,269, of which 2,780 pounds, valued at \$13,015, were from Cuba, and the small remainder from China; cut tobacco, 15,778 pounds, valued at \$12,950, of which 3,976 pounds, valued at \$2,023, were from the United States, 2,372 pounds, worth \$272, from China, and 9,430 pounds, valued at \$10,655, from Great Britain. All plug tobacco imported at Victoria comes from the United States. The total during the first six months of 1899 was 10,566 pounds, valued at \$3,931.

A large quantity of manufactured tobacco and cigars comes from Montreal and other points in Ontario, and is not included in the totals given. It is claimed that sometimes the eastern Canadian factories manufacture inferior Canadian tobacco, and label it "U. S.," which shows that the American article is superior and preferred.

ABRAHAM E. SMITH, *Consul*.

VICTORIA, *September 29, 1899.*

## NEWFOUNDLAND.

All imports into Newfoundland are entered at St. Johns, the capital, where all the outport dealers purchase their supplies. The following table shows the total imports of all kinds of tobacco for the year ended June 30, 1899:

|                             | United States. | United Kingdom. | Canada.        | British West Indies. | St. Pierre.    |
|-----------------------------|----------------|-----------------|----------------|----------------------|----------------|
|                             | <i>Number.</i> | <i>Number.</i>  | <i>Number.</i> | <i>Number.</i>       |                |
| Cigars .....                | 59,350         | 220,500         | 94,060         | 2,900                |                |
| Cigarettes .....            | 307,000        | 127,100         | 208,600        |                      |                |
|                             | <i>Pounds.</i> | <i>Pounds.</i>  | <i>Pounds.</i> | <i>Pounds.</i>       | <i>Pounds.</i> |
| Tobacco: Manufactured ..... | 144,437        | 7,108           | 50,479         |                      | 627            |
| Leaf .....                  | 389,603        |                 | 10             |                      |                |
| Leaf and stems .....        | 1,881          |                 |                |                      |                |
| Stems .....                 | 1,973          |                 |                |                      |                |
| Stems for snuff .....       | 1,210          |                 |                |                      |                |

There is practically no light Virginia leaf tobacco used in this market. Importers of leaf tobacco are manufacturers, and merchants import manufactured tobacco.

The principal importers of tobacco are: Manufactured, Hearn & Co., and T. & M. Winter; unmanufactured, J. & W. Pitts, and Newfoundland Tobacco Works.

There is no fault found with the packing or qualities of American tobacco.

MARTIN J. CARTER, *Consul*.

ST. JOHNS, *October 24, 1899.*

### BRITISH HONDURAS.

The import figures for the last year as given me by the officers of customs at this port (through which all tobacco for the whole colony is entered) are:

|                     | Quantity.      | Value.   |
|---------------------|----------------|----------|
|                     | <i>Pounds.</i> |          |
| Leaf tobacco:       |                |          |
| United States ..... | 133,780        | \$12,553 |
| Mexico .....        | 432            | 65       |
| Honduras .....      | 442            | 101      |
| Guatemala .....     | 150            | 68       |
| Cut tobacco:        |                |          |
| United States ..... | 1,354          | 467      |
| Great Britain ..... | 764            | 408      |

I can not find that the terms "Virginias" or "Western" are known in this trade, but the leaf tobacco that is imported is of a heavy black quality, sold in the United States at 8 or 10 cents per pound, and known as "Black-horse leaf." It always comes packed in hogsheads and is in good condition. While exact figures are not obtainable, I am reliably informed that more than nine-tenths of the leaf tobacco imported is what would be classified as "Western."

The importers at this port and in this colony are dealers only. The manufacture of cigars from leaf tobacco is insignificant, and here I would quote the import figures of cigars for 1898, viz:

| Countries.          | Number. | Value.  |
|---------------------|---------|---------|
| United States ..... | 45,475  | \$1,037 |
| Great Britain ..... | 14,600  | 459     |
| Mexico .....        | 126,850 | 3,324   |
| Cuba .....          | 21,900  | 431     |
| Guatemala .....     | 11,000  | 32      |
| Honduras .....      | 62,000  | 335     |
| Jamaica .....       | 16,550  | 317     |

The value of cigarettes imported is \$2,700, of which \$2,109 worth comes from the United States.

In the line of leaf tobacco, it would be difficult to increase the proportion or the volume of imports from the United States, for we virtually have all the trade, and it will be noticed that the quantity of manufactured tobacco, though large, is of vastly inferior quality and market value.

The number of importers here is about fifty, but as the names of the largest shippers only are requested, I would mention W. G. Aikman & Co., Stevens Bros., Charles E. Peters, Mutrie, Arthur & Currie, and Belize Estate and Produce Company. I hear no complaint as to packing or handling, but to my own knowledge the smoking tobaccos and cigarettes that are imported from England are packed much better (being always in air-tight tins) and more attractively than those received from the States. This will perhaps answer the question as to bright Virginias in the circular. If our merchants would ship tobacco and cigarettes in other than paper and pasteboard packages, they would sell more. Our tobaccos mildew rapidly in this moist climate, while English goods are as fresh when opened as when packed; but as far as the raw material is concerned, in which attractiveness is not of importance, the imports show that the leaf from the United States is wholly satisfactory and is well received.

W. L. AVERY, *Consul.*

BELIZE, *September 13, 1899.*

### COSTA RICA.

The importation of leaf tobacco into Costa Rica is a Government monopoly. The right to import American tobacco, classed as Kentucky, Virginia, and Breva, is granted to Walter J. Ford. The right to import Salvadoreño is granted to Demetrio Iglesias.

Of the three American brands above named, there were imported during the fiscal year ended April 30, 1899, as follows:

| Brand.        | Kilograms. | Pounds.  |
|---------------|------------|----------|
| Kentucky..... | 22, 880    | 50, 411  |
| Virginia..... | 34, 807    | 76, 736  |
| Breva.....    | 72, 975    | 160, 880 |

There were sold during the same period:

| Brand.        | Kilograms. | Pounds.  |
|---------------|------------|----------|
| Kentucky..... | 14, 880    | 32, 804  |
| Virginia..... | 28, 525    | 62, 886  |
| Breva.....    | 65, 205    | 154, 757 |

Of Salvadoreño, there were imported 113,255 kilos (249,682 pounds), and sold, 85,255 kilos (187,953 pounds). In addition, a few thousand kilos of Mexican and Colombian tobacco were sold.

I am not aware that any fault is found with the quality or packing of American tobacco.

Until recently, the sale of tobacco grown in Costa Rica was prohibited, but this restriction has now been removed and Costa Rican leaf is likely to become a factor of importance in the tobacco trade of the country.

JOHN C. CALDWELL, *Consul*.

SAN JOSE, *November, 1899.*

## HAITI.

The total imports of unmanufactured tobaccos into this port during the past year amount to about 200,000 pounds, all "Western," and shipped from New York:

The importers of tobacco at this port are merely dealers. The principal ones are Messrs. O. Cutts & Co., C. Lyon Hall & Co., M. Demeuran Valade & Co., Reoux & Delinois, A. Villjoint & Co., P. Faine, Etienne fils, P. E. Painson & Co., Aug. Gabriel, and Ernest Dalencour.

No fault is found with the packing.

The western tobacco imported here is sold to the small dealers, who retail it by the pound to makers of small, roughly constructed cigars or cheroots, which are sold at 1 cent apiece. These are smoked more or less by all classes of people. Some of this tobacco is used for pipe smoking by the country people generally, but not a very large quantity.

No Virginian tobacco is imported here. Nearly all the tobacco used for cigarettes is imported from France, as well as the ready-made cigarettes. I am informed that the Virginian tobacco does not suit this market, being too costly in price and too light in color; the people from habit prefer a dark yet mild tobacco, such as the French "Caporal," which is put up in small packages of three ounces each, retails at 30 cents per package, and is the brand used principally for cigarettes.

Tobacco chewing is rare here.

JOHN B. TERRES,  
*Vice Consul-General.*

PORT AU PRINCE *September 21, 1899.*

## ARGENTINE REPUBLIC.

The total import of unmanufactured leaf tobacco into this port and the places whence it is shipped are:

|                | Kilos.  | Pounds.   |                          | Kilos.    | Pounds.    |
|----------------|---------|-----------|--------------------------|-----------|------------|
| Bahia .....    | 600,000 | 1,322,760 | Pennsylvania .....       | 6,000     | 13,228     |
| Habana .....   | 120,000 | 264,552   | Paraguay .....           | 570,000   | 1,256,622  |
| Sumatra .....  | 24,500  | 54,013    | Argentina .....          | 8,000,000 | 17,636,800 |
| Virginia ..... | 50,000  | 110,230   | Kentucky "Western" ..... | None.     | None.      |

The importers of tobaccos in this city are dealers only, the principal ones being E. Mickinon & Coelho, Metzen Vincento & Co., H. Rathje & Co., and Woolweber & Co.

There are no faults found with the packing nor with the quality of American tobaccos, but there seems to be a great injustice done them in the tariff. Tobacco from Paraguay looks exactly like that from Virginia, but is inferior and sells at \$5, paper (\$2.00 gold), per 10 kilos (22 lbs.), while the Virginia sells at \$15, paper (\$6.00), per 10 kilos (22 lbs.). The tariff on American tobacco is \$7.50, paper (\$3.00), per 10 kilos (22 lbs.), although it is placed on board at New York at 80 cents, gold, equal to \$2 paper, per 10 kilos. In other words, the tariff on our tobacco is more than 150 per cent of its real value.

If the duties on American tobaccos were reduced, there would be a vast difference in the imports, as they would be mixed with Argentine tobacco, but under the present system the importation of American tobaccos is almost prohibited.

D. MAYER, *Consul.*

BUENOS AYRES, *October 6, 1899.*

## BRITISH GULANA.

This colony imported unmanufactured tobacco during the year ended March 31, 1899, as follows:

| Countries.                     | Quantity.      | Value.    |
|--------------------------------|----------------|-----------|
|                                | <i>Pounds.</i> |           |
| From Holland .....             | 3,549          | \$720.00  |
| From Dutch Gulana .....        | 4,549          | 380.00    |
| From British West Indies ..... | 2,449          | 196.92    |
| From United States .....       | 626,041        | 47,888.62 |
| Total .....                    | 636,588        | 49,184.54 |

The western, from Kentucky, designated here as black fats, holds the market, and the quality and packing are satisfactory.

The principal importers at this port, who are merely dealers, are Wieting & Richter, De Jonge & Smith, and J. P. Santos.

#### DUTY.

Unmanufactured tobacco imported in packages of 800 pounds or over, containing 10 per cent or more of moisture in every 100 pounds weight, is taxed 50 cents per pound duty. If containing less than 10 per cent of moisture in every 100 pounds, 60 cents per pound duty; in packages of less than 800 pounds, containing 10 per cent or more of moisture in every 100 pounds, 60 cents per pound; containing less than 10 per cent of moisture in every 100 pounds, 80 cents per pound.

The duty on manufactured tobacco (cigars and cigarettes excepted) is \$1 per pound.

#### THE TRADE.

I am advised that there is a good field in this market for successful competition in fine cut, manufactured cigarettes, and cigarette tobacco. Formerly, the cakes and sticks of American manufacture held the trade; but the English ready cut, put up in tins with well-fitted covers, was successfully introduced, paralyzing our trade completely and driving us out of the market.

The bulk of the cigarette and smoking tobacco trade is monopolized by W. D. & H. O. Wills, of Bristol, England. Cope Bros. & Co., of Liverpool and London, supply a small proportion.

#### PRICES.

The sizes generally imported are 1, 2, and 4 ounce tins. The manufacturer's prices are 64 cents per pound for 1-ounce tins, 54 cents per pound for 2 ounce, and 48 cents per pound for 4 ounce, less 5 per cent commission.

The importers sell to local retailers at \$1.75, \$1.68, and \$1.60 per pound for the respective sizes, and they are disposed of to customers at 12 cents per 1 ounce, 22 cents for 2 ounces, and 44 cents for 4-ounce tins.

A small quantity of tobacco is grown in this colony and consumed locally. Its cultivation is in the experimental stage. On account of the excessive moisture of the climate, difficulty, I understand, has been experienced in curing it properly. A Government grant of a large tract of land on the Upper Surinam River, in Dutch Guiana, has been obtained by outside parties for the purpose of growing tobacco. The soil is considered favorable, but the same humidity of climate prevails in that region as here.

GEO. H. MOULTON, *Consul.*

DEMERARA, *October 25, 1899.*

## CHILE.

In the statistics of Chile of 1897 (none later published), all tobacco imported is divided into two classes—assorted, which is grown in many parts of the world, and Habana (Cuban). Of the latter, 70 kilograms (154 pounds) were imported from France, 666 kilograms (1,468 pounds) were imported from Germany, and 10,949 kilograms (24,138 pounds) were imported from Spain.

Of tobacco imported from various parts of the world, the following may be considered as nearly accurate: 4,605 kilograms (10,152 pounds) were imported from France, 9,667 kilograms (21,312 pounds) from Great Britain, 6,283 kilograms (13,852 pounds) from Germany, 116 kilograms (256 pounds) from China, 16,479 kilograms (36,329 pounds) from the United States, and 15,827 kilograms (34,892 pounds) from Peru.

According to the opinion of dealers, the greater part of the total importation of tobacco from the United States was Virginia leaf. The remainder consisted of Western and what is termed Connecticut leaf, this being used for cigar wrappers.

Most of the importers of tobacco in this country are dealers and manufacturers. Of the latter, the principal ones are; La Corona, Compañía General de Tabacos; La Belleza, Roldan y Cia.; El Pensamiento de Cuba, Manuel Dominguez; La Constancia, Francisco Bettancourt; El Nuevo Pensamiento, Vieytes Hermanos; Compañía Sud Americana de Tabacos. Of dealers only, Soltau y Compañía and Kirchoff y Compañía are the principal.

It does not appear that fault is found with the packing of American tobacco, which is packed better than the tobacco of Peru, Ecuador, Colombia, Brazil, Bolivia, or the Argentine Republic.

Tobacco of a very inferior quality is grown widely in Chile. All the cheaper classes of cigars and cigarettes are made of unmixed Chilean tobacco.

Better classes of cigarettes are made of this mixed with assorted foreign goods, such as light leaf Virginia, Esmeralda (Ecuador), Bahia (Brazil), Ambalena (Colombia), etc.

Of tobacco from the United States, light leaf Virginia is preferred for good cigarettes, although medium colored is used. Connecticut leaf is as much used for wrappers as Sumatra, and is cheaper. About one per thousand of the inhabitants smoke pipes and about one per 20,000 chew tobacco. No Chilean has been known to chew tobacco, so that pipe smoking and chewing tobacco can be sold only to foreign residents and to ships visiting the port. In my opinion, the light-colored varieties of Virginia leaf are, after Habana, the best liked for cigarettes. Habana is the most costly. Virginia follows closely in price. Leaf tobacco pays a custom duty of \$2.60 (specific) per kilo-

gram. Chopped tobacco for cigarettes pays \$4 per kilogram (specific). Chilean gold dollars are valued at 36 cents, United States currency.

Chilean tobacco was sold during the year 1898 at \$3.60 American gold per 100 pounds, but it has gone up steadily in price until now, in January, 1900, it is sold as high as \$9.30 per 100 pounds.

The reason of the rise is the heavy protective duty levied on foreign tobaccos. About 1 per cent of the cigarettes consumed here are made of foreign tobaccos and 99 per cent of the Chilean product, upon which no tax is exacted. As there are no stocks of other tobaccos, no quotations can be given.

JOHN F. CAPLES, *Consul*.

VALPARAISO, *January 16, 1900.*

## ECUADOR.

Ecuador imports no leaf tobacco. The table appended shows the small business done both in the import and export of this product.

Tobacco is raised in the provinces of Daule, Santa Rosa, and Esmeraldas. A portion of the Esmeraldas crop is exported to Germany, the Santa Rosa goes to Peru, and the Daule is used locally.

Few cigars and cigarettes are imported, and no chewing tobacco or snuff. Local consumption absorbs by far the greater part of the crop. Cigars constitute the chief item.

| EXPORTS.                    |         | IMPORTS.                           |       |
|-----------------------------|---------|------------------------------------|-------|
| Germany (leaf).....pounds.. | 101,000 | Cuba (cigarettes).....number..     | 4,767 |
| Peru.....do.....            | 6,646   | Cuba (cigars).....do.....          | 2,730 |
| All other.....do.....       | 1,775   | Cuba (unmanufactured).....pounds.. | 595   |
| Total.....                  | 109,421 | All other.....do.....              | 1,065 |
|                             |         | Total.....                         | 9,157 |

The United States can not create a market for its tobacco in Ecuador; per contra, Ecuador tobacco has not found favor in the United States.

PERRY M. DE LEON,  
*Consul-General.*

GUAYAQUIL, *October 25, 1899.*

## URUGUAY.

Importations of leaf tobacco into Uruguay from the United States are limited. They appear in the Montevideo customs returns under the general classification of "Virginia tobacco." The importers of tobacco leaf are usually manufacturers, though some "job" to smaller dealers who are also manufacturers of cigars.

Fault has been found with the American methods of packing. In some cases, the centers of the bales were musty and in bad order; in others, the goods were not up to order sent, but were made up of two or three different grades, when only one grade had been purchased, and that of the best. These goods, it should be said, were bought through New York brokers, but seemed to be in the original packages—so far as one not an expert in packing tobacco could judge. The classes I specially refer to were bought for cigarette and cigar manufacture—a bright looking leaf—and when sound had a fine aroma. Where care has been taken in the packing, to guard against the damage by sea damp, no damage has been reported. Some packages from Richmond houses were specially noted for the thorough method of protection adopted—superior to any other found in the warehouses here.

The importation of tobacco from all countries is herewith given, as taken from the latest official data issued (for 1897), with comparative totals for the years 1895 and 1896:

| Description.                                | Kilos. <sup>1</sup> | Value.  |
|---|---------------------|---------|
| Pichua.....                                 | 6,667               | \$2,667 |
| Snuff.....                                  | 3,356               | 3,020   |
| Leaf tobacco:                               |                     |         |
| Bahia, Brazil.....                          | 116,271             | 41,276  |
| Philippine Islands.....                     | 4,244               | 1,507   |
| Habana.....                                 | 24,381              | 14,629  |
| Hamburg.....                                | 6,950               | 2,467   |
| Paraguay.....                               | 237,805             | 34,482  |
| Rio Grande, Brazil.....                     | 59,531              | 8,632   |
| Sumatra.....                                | 6,784               | 2,396   |
| Virginia, U. S. A.....                      | 90,130              | 31,996  |
| Manufactured tobacco (Caporal, France)..... | 447                 | 536     |
| Manufactured Habana tobacco.....            | 3,159               | 3,791   |
| Manufactured Virginia tobacco.....          | 806                 | 967     |
| Black tobacco (Brazil).....                 | 19,704              | 8,079   |
| Chewing tobacco.....                        | 68                  | 33      |
| Total.....                                  | 580,267             | 156,478 |

<sup>1</sup> Of 2,2046 pounds.

Totals for 1895, \$204,494; 1896, \$215,117; 1897, \$156,478.

The more important and reliable houses importing Virginia tobacco are Metzen, Vincenti & Co., Antonio Vivo, Julio Mailhos, and Dauckleman & Schradder.

The duty on American tobacco (called "Virginia" in the tariff list) is the same as on the Bahia—it is valued at 35 cents per kilo, upon which the duty is  $7\frac{1}{2}$  per cent, and 30 cents the kilo, specific tax, is levied on the gross weight.

ALBERT W. SWALM, *Consul*.

MONTEVIDEO, *October 12, 1899.*

## VENEZUELA.

## MARACAIBO.

I regret that I am not able to give much information, as neither of the American tobaccos known as "Virginia" nor "Western" is imported here. No tobacco for pipes is used; almost everyone smokes cigarettes made of Cuban tobacco and native mixed, or cigars made of Habana tobacco and imported ready made, or cigars made of native tobacco.

The foreign colony, mostly German, imports supplies from Hamburg or Bremen. The native cigars are all handmade, and without skill, but in quality many equal if they do not surpass other cigars, with the exception of the better Habana classes.

There is, to my knowledge, no importation of leaf tobacco here. As stated before, most of the imported tobacco comes from Cuba, and is what we call "Picadura" (ready cut to roll cigarettes). There is also used what is called "Virginia" as a mixture in cigarettes of lower quality; this comes by way of Puerto Cabello and La Guayra. It is therefore impossible to obtain statistics in regard to the total imports, which amount to very little.

Importers of tobacco are mostly manufacturers of cigarettes. The chief ones are: German del Gallego, Wenceslao Moreno, Eduardo Vargas, R. Bohorquez & Co., Rafael Belloso R., E. MacGregor & Co.

As to how United States tobaccos compare with foreign products, this is largely a question of taste, depending upon the climate, food, drink, etc. During the many years that I spent in Java, Sumatra, the Sulu Archipelago, and the Philippines, I could not smoke any kind of cigar but a Manila; the climate, the fiery drinks, the highly seasoned food cultivated my taste for it.

During my stay of over twenty years in South America, I have learned to appreciate a good Habana cigar; the Manila now seems too dry.

As long as the duties levied upon United States tobacco by the Government of Venezuela are so high, there is no possibility of extending our commerce in this line; but if Americans would come here and plant and cure and prepare tobacco, there is every probability that they would find it remunerative.

There are in this consular district large tracts of land which would produce a tobacco equal to that of the Vuelta Abajo district of Cuba. These lands can be had for a few dollars a hectare, and less in larger tracts. I am sure that the government of the State of Zulia would make gifts of lands for such enterprises.

I believe that much of the product, if not all, could be sold in Venezuela. The use of cigars and cigarettes is widespread, but up to date

the people have not learned to cure and prepare their tobaccos; neither do they know how to make a cigar pleasant to the eye.

A few weeks ago, there was started in Maracaibo a company named "Deutsche Taback Plantagen Gesellschaft Perija," by two Germans, Messrs. Harms & Sinram. They have begun to cultivate large tracts of land, and have introduced from Cuba laborers versed in the work.

E. PLUMACHER, *Consul*.

MARACAIBO, *September 25, 1899.*

### PUERTO CABELLO.

Most of the importers of tobacco in this district are dealers, and the tobacco they import comes from the United States; it is satisfactorily packed and is called Virginia.

The following quantities were imported in the last three months:

| Importers:                | Pounds. |
|---------------------------|---------|
| Braschi & Sons.....       | 4, 172  |
| Boulton & Co .....        | 2, 119  |
| A. Ermen .....            | 1, 368  |
| J. B. Echeands.....       | 407     |
| M. Frey .....             | 2, 828  |
| Rivas, Fensohn & Co ..... | 1, 324  |
| R. & O. Kolster .....     | 2, 577  |
| C. Roderiquez.....        | 2, 089  |
| J. A. Lopez .....         | 960     |
| Total .....               | 17, 844 |

LUTHER T. ELLSWORTH, *Consul*.

PUERTO CABELLO, *November 23, 1899.*

## AFRICA.

### CANARY ISLANDS.

The quantity of leaf tobacco imported at the port of Teneriffe from January 1 to June 30, 1899, was:

|                | Pounds. |
|----------------|---------|
| Habana .....   | 1, 365  |
| Sumatra .....  | 1, 508  |
| Filipino ..... | 56      |
| Virginia ..... | 37, 568 |
| Total .....    | 40, 497 |

It is impossible to distinguish Virginia from Western, as all leaf tobacco grown in the United States and imported here is classed at the custom-house as Virginia, which pays the lowest rate of duty, namely, 25 centimos (equal at present rate of exchange to 4 cents in

United States coin) per pound; Puerto Rico pays the same, Habana and Sumatra pay 50 centimos (8 cents). Consular Agent M. Yanes reports to me that about 100 hogsheads of 1,600 pounds each are imported into his district (the island of La Palma), but imports are on the decline, as they have commenced to produce it locally. The principal importers in La Palma are Hijos de Juan Yanes and Juan C. Martin. Consular Agent Peter Swanston reports to me from Las Palmas, for the island of Grand Canary, the following:

There are about 200 hogsheads of tobacco imported here. It is impossible to find the proportion of Virginia or Western, as it is all classed as Virginia leaf tobacco. The principal importers are: Hijos de Juan Rodriguez, Elder Dempster & Co., and Swanston & Co. There are many manufacturers, but they do not import. Tobacco of inferior quality can be grown on the island of Grand Canary. There is no fault found with our packing.

The principal importers at Teneriffe are: Aurelian Yanes, J. Ruis Arteaya, H. Miller y Yanes, H. Vorbeck, and Francisco Camberleng.

Manufacturers are: Jose Garcia, Vola de Ramon Gomez, Jose Zamorano, Elias Roja, Ignacio Zamorano, Luis Zamorano, C. S. Isaaks.

All the leaf tobacco grown in the United States is shipped here from Hamburg and Gibraltar. There is no direct communication with our country, and a steamship line which would give monthly service would get the leaf tobacco trade, as well as that in other products now sent via other countries.

The Canary Islands, with a population of 365,000 (census of June, 1899), import nearly everything consumed. There is a good field for our manufacturers and merchants, if direct communication could be established. At present, the high freights and transshipment charges make trade unprofitable. As to banking facilities with the United States, there are none to speak of. The people at present are in a fairly prosperous condition, being principally engaged in raising bananas, tomatoes, almonds, and potatoes, which are nearly all sent to England in the fall, winter, and early spring.

I am just informed that an extra war tax of 20 per cent has been put on leaf tobacco, which makes the duty on Virginia 30 centimos, equal to about 5 cents United States coin.

SOLOMON BERLINER, *Consul*.

TENERIFFE, *October, 1899.*

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## LIBERIA.

It is next to impossible to obtain accurate figures of imports of unmanufactured (leaf) tobaccos into this port for any definite period. The imports are from European markets, and the purchasers do not know whether they are American or not. (American products, however, have largely ceased to come to this country since the trade of

Messrs. Yates and Porterfield, of New York, ceased.) As the names of the original producers or manufacturers are not on the casks when they reach here, it is not known to the customs officials whether they are Virginia or Western tobacco. Manufactured tobacco is not used here; only the unmanufactured leaf, shipped in hogsheads or casks.

There are no manufacturers here; the importers are dealers. R. H. Jackson, Messrs. Hill & Moore, and Jas. B. McGill, Monrovia, do considerable trade in tobacco.

No complaints as to methods of packing, etc., are heard. From a past knowledge of the superior qualities of American tobaccos, merchants and consumers prefer them to all others, when obtainable.

Five-eighths of the native population, both male and female, carry pipes or tobacco in the mouth. Liberian merchants say American manufacturers can easily have a monopoly of the tobacco trade here, by establishing direct steamship communication between New York, Philadelphia, Boston, Baltimore, or Norfolk, and this country.

OWEN L. W. SMITH,  
*Consul-General.*

MONROVIA, *October 10, 1899.*

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## LOURENCO MARQUEZ.

Consul Hollis writes from Lourenco Marquez, December 6, 1899:

In reply to Department circular of August 30, I have to report that some \$50,000 worth of tobacco, in various forms, was imported here during the past year, and that 95 per cent of this amount came from Portugal. The tobacco trade of this place is entirely in the hands of the Portuguese tobacco trust.

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## MOROCCO.

The total annual import of unmanufactured (leaf) tobacco into the port of Tangier is as follows:

From the United States, 1,100 hundredweight (of these, about 200 hundredweight are "Virginias"); from all other sources, 4,500 hundredweight.

Importers here are manufacturers, the principal firm being Sananes & Benasayag.

Packing and quality of American tobaccos are found satisfactory.

Dark tobaccos are used generally in this country.

The use of tobacco in Morocco has increased about 30 per cent during the last five years. It is to be observed that nearly all American tobaccos come here through middlemen in Germany or other countries,

and that with direct communication, a great field for American tobacco would be opened here.

S. R. GUMMERÈ,  
*Consul-General.*

TANGIER, *September 26, 1899.*

### SIERRA LEONE.

Sierra Leone continues to be a good market for unmanufactured tobacco. The total amount imported for the year 1898 was valued at \$78,727.13, of which \$51,298.15 was imported from the United States; the remaining \$27,938.98 worth was divided principally between England and Germany, a very small quantity coming from the Leeward and Windward Islands and from French Senegal. There is a considerable quantity of American tobacco that reaches this port via England, for which the United States is not credited in the returns; therefore we are justified in saying 75 per cent of the leaf tobacco that reaches this market is the product of the United States. Messrs. Yates & Porterfield (French), The Sierra Leone Coaling Company, Broadhurst, Sons & Co., Thompson Bros., Patterson & Zochonis are the principal importers of leaf tobacco. They are dealers only. The American methods of packing compare favorably with others in this market, and seem to give general satisfaction.

Sierra Leone has no plants for manufacturing tobacco, and there is but a limited demand here for the manufactured article; hence the finer bright Virginia used in the manufacture of cigarettes and smoking tobacco is not required for this market. The import of manufactured tobaccos into the colony for the year 1898 was \$11,747.64, coming principally from England, Germany, France, Holland, and the Grand Canary. Less than \$100 worth of this was from the United States direct. The duty on manufactured tobacco and cigars is 48 cents per pound, and on unmanufactured, 8 cents. The retail price of leaf tobacco varies anywhere from 24 cents to 48 cents a pound, and from 1 to 2 cents per leaf. There is no generally expressed preference for special grades of unmanufactured tobacco for this market. My personal observations, however, lead me to suggest the Western as more suited to the requirements of the trade of this coast. I may add that tobacco for the West African trade should be of an average size leaf, not too small, and not too light or dark in color, free from grit, and made into regular size bunches, for the convenience of the retail and barter trade. After leaving the wholesale dealer, it passes into many hands before reaching its destination. Besides this, it is used as currency in the interior, the leaf valued at 1 or 2 cents being the unit of calculation. There are no records by which I could deter-

mine the relative proportion of the Western and Virginia, respectively, imported, but, from what I have previously stated, it is evident that this trade requires common tobaccos.

JOHN T. WILLIAMS, *Consul*.

SIERRA LEONE, *January 27, 1900.*

## SOUTH AFRICA.

I regret my inability to furnish correct information concerning "Bright Virginias" or "Western" tobaccos imported through the ports of this colony, for the reason that tobacco is entered simply as "manufactured" or "unmanufactured." The total import of unmanufactured tobacco into Cape Colony, in 1898, was:

|                           | Pounds. |
|---------------------------|---------|
| From United Kingdom ..... | 73, 282 |
| From Mauritius .....      | 434     |
| From Natal.....           | 15, 456 |
| From Germany .....        | 8, 898  |
| From Holland .....        | 10, 973 |
| From United States .....  | 27, 448 |

I may add that the tobacco leaf from the United States is principally "Virginia."

There are very few manufacturers and dealers who import. At Johannesburg, in the Transvaal, there is a manufactory of cigarettes (formerly belonging to the American Tobacco Company, of the United States), which, when it runs, imports "Virginias." There are also two small manufactories of cigarettes in Kimberley that import, and a few others.

Importers in Cape Town are Congo Tobacco Company, O. Lamberg & Co., Victoria Cigar Factory, J. H. Sturk & Co.

Manufacturers of either cigars or cigarettes are: Acme Cigarette Company, Johannesburg; Atlas Tobacco Works, Johannesburg; W. S. Duke & Co., Johannesburg; Jay Bros., Johannesburg; H. A. Levors, Kimberley; Court Cigarette Factory, Kimberley; Holt & Holt, Kimberley; J. H. Drury & Co., Port Elizabeth; Robinson & Co., Durban; Johannesburg Cigarette Company, Johannesburg; E. Ebert & Co., Cape Town; Hermann & Conard, Cape Town; Woof & Co., Cape Town.

The country is not a manufacturing nation; it depends upon its imports, and will continue to do so for many years to come. No fault is found with the packing or quality of American tobaccos, and they are considered superior to all others, particularly for cigarettes.

It must be remembered that the imports from the United Kingdom in this line consist largely of cigars and cigarettes from the United States and other countries, shipped by London houses. I attach a

statement of imports of cigars and cigarettes into all of South Africa, through the ports of Cape Colony and Natal.

J. G. STOWE, *Consul-General*.

CAPE TOWN, *October 5, 1899.*

*Cigars and cigarettes imported through ports of Cape Colony.*

| Cigars:                  | Number.     | Cigars—Continued.        | Number.      |
|--------------------------|-------------|--------------------------|--------------|
| United Kingdom .....     | 6, 910, 718 | Canary Islands .....     | 19, 130      |
| Ceylon .....             | 60, 000     | Philippine Islands ..... | 50, 000      |
| Hongkong .....           | 290, 000    | United States .....      | 221, 525     |
| India—                   |             | Other countries .....    | 2, 250       |
| Madras .....             | 548, 550    | Cigarettes:              |              |
| Bengal .....             | 445, 178    | United Kingdom .....     | 20, 413, 259 |
| West India Islands ..... | 9, 000      | Malta .....              | 30, 000      |
| New South Wales .....    | 20, 000     | Aden .....               | 249, 000     |
| Belgium .....            | 176, 950    | Natal .....              | 905, 680     |
| France .....             | 2, 192, 677 | Germany .....            | 468, 170     |
| Holland .....            | 1, 265, 056 | Italy .....              | 50, 000      |
| Madeira .....            | 12, 300     | United States .....      | 59, 000, 000 |
| West Indies (Spanish) .. | 20, 450     | Other countries .....    | 2, 800       |

*Cigars and cigarettes imported through ports of Natal.*

| Cigars:                       | Pounds. | Cigars—Continued.             | Pounds. |
|-------------------------------|---------|-------------------------------|---------|
| United Kingdom .....          | 15, 119 | Egypt .....                   | 35      |
| Calcutta .....                | 1, 984  | United States .....           | 64      |
| Madras .....                  | 4, 563  | Cigarettes:                   |         |
| Ceylon .....                  | 62      | United Kingdom .....          | 6, 700  |
| Cape Colony (reshipped) ..... | 6, 848  | Cape Colony (reshipped) ..... | 11, 875 |
| Belgium .....                 | 1, 159  | Belgium .....                 | 15      |
| France .....                  | 766     | Germany .....                 | 3, 260  |
| Germany .....                 | 17, 564 | Holland .....                 | 145     |
| Holland .....                 | 6, 265  | Egypt .....                   | 87      |
| Switzerland .....             | 264     | United States .....           | 29, 160 |
| Canary Islands .....          | 166     |                               |         |

*Unmanufactured, leaf.*

|                               | Pounds. |                     | Pounds. |
|-------------------------------|---------|---------------------|---------|
| United Kingdom .....          | 51, 908 | Germany .....       | 10, 400 |
| Calcutta .....                | 600     | Holland .....       | 10, 436 |
| Madras .....                  | 6, 654  | Egypt .....         | 578     |
| Cape Colony (reshipped) ..... | 2, 260  | Zanzibar .....      | 923     |
| France .....                  | 600     | United States ..... | 20, 541 |

## ASIA.

## ADEN.

There is no leaf tobacco imported into Aden from the United States.

The persons who import tobaccos, unmanufactured, other than Arabian, are cigarette manufacturers, the principal firms in Aden being Livirato & Co. and A. G. Pappadellis.

The local manufacturers make about 30,000,000 cigarettes per annum, and use Turkish tobacco almost exclusively. I do not think American unmanufactured tobacco was ever imported here, certainly not in any quantity.

E. S. CUNNINGHAM, *Consul*.

ADEN, *September 27, 1899.*

## BRITISH INDIA.

The total imports of unmanufactured (leaf) tobacco into British India during the year 1898-99 were 509,130 pounds, valued at \$112,492, as follows:

| Origin.                      | Quantity.      | Value.  | Origin.                            | Quantity.      | Value. |
|------------------------------|----------------|---------|------------------------------------|----------------|--------|
|                              | <i>Pounds.</i> |         |                                    | <i>Pounds.</i> |        |
| From the United Kingdom..... | 19,154         | \$3,526 | From Java.....                     | 665            | \$43   |
| From Belgium.....            | 3,042          | 3,680   | From Mekran and Sonmi-<br>ani..... | 90             | 3      |
| From Holland.....            | 51             | 17      | From Persia.....                   | 4,109          | 419    |
| From Turkey in Europe.....   | 16,006         | 3,840   | From Straits Settlements..         | 63,795         | 9,360  |
| From Egypt.....              | 1,485          | 915     | From Sumatra.....                  | 88,167         | 78,285 |
| From United States.....      | 5,351          | 755     | From Turkey in Asia.....           | 4,378          | 1,658  |
| From Ceylon.....             | 302,838        | 9,990   |                                    |                |        |

The importers of tobacco are principally cigar manufacturers, the chief firms being Spencer & Co., Limited; McDowell & Co., Limited; G. Mengel & Co., Limited, and Marks & Co., Limited, cigar manufacturers at Dindigul, Madras Presidency; and Oakes & Co., Limited, cigar manufacturers at Madras.

I hear no complaints of the packing of American tobacco. As will be seen, a large proportion of the tobacco comes from Ceylon, Straits Settlements, and Sumatra, and it is used for wrappers, with Indian tobacco fillers. Only a small quantity comes from the United States. If our dealers in bright "Virginias" would correspond with the firms whose names are given above, they might perhaps establish a trade for their tobacco.

R. F. PATTERSON, *Consul-General*.

CALCUTTA, *October 26, 1899.*

## CEYLON.

The amount of tobacco passing the Ceylon customs in 1898 was: Manufactured, 161,824 pounds, valued at \$67,346; and unmanufactured (leaf) tobacco, 8,734 pounds, valued at \$912, making a total of 170,538 pounds, valued at \$68,258.

The inclosed schedule shows the countries from whence imports came, and although only 17,208 pounds, valued at \$5,913, are credited to the United States, nevertheless a moiety of the 135,428 pounds, valued at \$57,610 and credited to the United Kingdom, was probably American tobacco, as also of the 8,834 pounds, valued at \$3,681, from India.

As considerable tobacco is grown in Ceylon, the imports of the unmanufactured article will never be considerable, and will generally come from the neighboring continent of India. I would report, therefore, that—

1. No American leaf tobacco is imported here.
2. Ceylon importers are dealers only; no tobacco is manufactured here.
3. Cargills, Limited, Miller & Co., Colombo Apothecaries Company, Limited, Aitkin, Spence & Co., Volkart & Bros., Bosanquet & Co., all of Colombo, are the chief local importers of tobacco.
4. No fault is found with the packing of American tobacco, and it is the best we can get here.
5. No one here knows anything about bright Virginias.

W. MOREY, *Consul.*

COLOMBO, *October 31, 1899.*

*Tobacco imported at Ceylon during the calendar year 1898.*

| Countries.                          | Quantity.      | Value.   |
|-------------------------------------|----------------|----------|
| <b>Manufactured:</b>                | <i>Pounds.</i> |          |
| From United Kingdom .....           | 135,428        | \$57,610 |
| From Aden .....                     | 180            | 78       |
| From British India .....            | 8,834          | 3,681    |
| From France .....                   | 96             | 40       |
| From Germany .....                  | 29             | 12       |
| From Russia .....                   | 80             | 12       |
| From United States of America ..... | 17,208         | 5,913    |
| <b>Total</b> .....                  | 161,824        | 67,346   |
| <b>Unmanufactured:</b>              |                |          |
| From United Kingdom .....           | 556            | 60       |
| From British India .....            | 7,212          | 751      |
| From Maldive Islands .....          | 40             | 5        |
| From Turkey in Asia .....           | 926            | 96       |
| <b>Total</b> .....                  | 8,734          | 912      |
| <b>Grand total</b> .....            | 170,538        | 68,258   |

## CHINA.

There was imported into Shanghai, in 1898, according to the customs returns:

| Description.               | Quantity.      | Value in United States gold. |
|----------------------------|----------------|------------------------------|
|                            | <i>Pounds.</i> |                              |
| Tobacco.....               |                | \$21, 152. 60                |
| Tobacco, leaf.....         | 438, 400       | 42, 862. 40                  |
| Tobacco, prepared.....     | 71, 333        | 8, 242. 50                   |
| Tobacco, stalk.....        | 362, 400       | 3, 892. 00                   |
| Cigarettes, about.....     | 400, 000, 000  | 401, 090. 20                 |
| Tobacconists sundries..... |                | 52, 857. 00                  |

The bulk of this is "Virginia" tobacco, but I have no means of knowing the exact proportion.

The importers are dealers, except the American Trading Company, which also manufactures cigarettes (say, 75,000,000 per annum), and is about to manufacture cigars.

Mustard & Co. is the principal American firm importing prepared tobacco and cigarettes. The American Trading Company is the principal importer of leaf and stalk.

Leaf tobacco has been sent in hogsheads of 1,200–1,400 pounds, which are too large for the methods of handling at this port. Practically, all freight is handled by coolies without the aid of machinery. A package too large to be easily managed in this way is apt to be broken, and in this damp climate the tobacco molds as soon as the air gets to it. Lately, a small amount of leaf tobacco has been sent in 800-pound hogsheads. Experience in other lines shows that 900-pound hogsheads are as heavy as can be safely handled here.

The heads of the hogsheads should be strongly strapped, so that they will not fall nor be knocked out.

Cigarettes should be wrapped in tin foil or packed in tin-lined boxes. Tobacco should be steam dried. Tobacco pressed in the ordinary way is likely to mold on the voyage via the Suez Canal.

In general, it must be remembered in shipping tobacco, raw or manufactured, to this market, that it makes a long voyage through a hot region, and that the climate here is warm and damp; therefore tobacco will "sweat" and mold if given any opportunity. If it is expected that cases are to be broken, the packages should be as large as possible, to minimize the proportion of the tobacco in the package which will be exposed to the air.

I desire to emphasize again the oft-repeated advice: Ship exactly what is ordered and exactly as it is ordered, or do not ship at all. The local dealers here know the peculiarities of this market, as the American shipper does not.

JOHN GOODNOW, *Consul-General.*

SHANGHAI, *October 3, 1899.*

## HONGKONG.

There is no business in American tobacco done in this colony, other than in a few cases of cigarettes, which come through London. Habana cigars will not retain their flavor in this damp climate, and even the cigarettes come packed in air-tight tins. Manila tobacco completely monopolizes the market, and even were it possible to import American tobacco here and sell it so as to compete with Manila, it would never become a serious rival. Although a great smoker myself, I would not smoke the best Habana cigars that are made in preference to a Manila in this climate. The price of the best Manila is about  $2\frac{1}{2}$  cents gold. The only smokers of American cigarettes are Europeans; the larger population of Portuguese and Asiatics smoke cigarettes made from Manila tobacco. There are no cigar manufacturers here, while all firms sell cigars and cigarettes. The principal handlers are Kruse & Co., Lane, Crawford & Co., Arnhold, Karberg & Co.

ROUNSEVILLE WILDMAN,  
*Consul-General.*

HONGKONG, *October 17, 1899.*

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## JAPAN.

### YOKOHAMA.

During the year 1898, leaf tobacco was imported into Japan from all countries to the extent of 41,084,384 pounds, valued at \$2,263,829. Of this, there came from China 32,176,145 pounds, valued at \$1,452,335, and from the United States 8,810,397 pounds, valued at \$799,117. The American leaf consisted entirely of what is known as "Virginias." During the first half of this year, as compared with same period of last year, the imports of leaf showed an increase valued at \$388,816.

Practically all of the Japanese importers of tobacco are also manufacturers. The principal importers in Japan are the American Tobacco Company at Yokohama, Murai Brothers at Kioto, Kimura & Co. and Iwaya & Co. at Tokyo, and the Osaka Tobacco Works at Osaka.

I can learn of no complaints of the packing or qualities of American tobaccos.

Tobacco was, during the past year, one of Japan's largest imports from us, but that year's figure will hardly be reached again for some time to come. The explanation of the situation is to be found in the fact that the Government of Japan decided to establish a monopoly on leaf tobacco, somewhat similar to the French system, and the last Diet passed the necessary laws therefor. The monopoly on the native leaf

took effect on the 1st of January, 1899, and on the imported, on the 15th of August, 1899. Under this system, all imported leaf is bought by the Government through two agents, appointed by the department of finance, on orders given by factories or licensed brokers. These agents, as at present named, are the Kansai Trading Company, of Kioto, and R. Yezoye, of Tokyo. When imported leaf, so ordered, arrives, it is delivered to the purchaser upon payment of laid-down cost plus the customs duty. For some time prior to the 15th of August, 1899, the factories had been importing heavily, in order to avoid the increased customs tax, and it is estimated that the stock of leaf tobacco now in the Empire will be sufficient for all purposes for more than two years to come. If this estimate be reliable, and I see no reason to doubt its correctness, it is manifest that importation under the monopoly during the next two years will be very light, and that we can expect a very limited demand here for American leaf, confined, perhaps, to small manufacturers who had not sufficient capital to complete their stocks before the monopoly law took effect.

A copy of the Japanese Government regulations for the tobacco monopoly will be found in my report of July 24, 1899.<sup>1</sup>

JOHN F. GOWDY,  
*Consul-General.*

YOKOHAMA, *October 13, 1899.*

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#### NAGASAKI.

The imports of leaf tobacco into this port during the first six months of 1899 were 106,373 catties (139,349 pounds), of which 78,040 (102,232 pounds) came from the United States, and were from Ohio, classed as "Western."

Holme, Ringer & Co. were the importers of tobacco at this port; they are dealers. They inform me that they have no complaint to make of the packing or quality of the tobacco imported from the United States.

As the "Law of monopoly of leaf tobacco," issued on the 15th of August, 1899, prohibits the importation of leaf tobacco, except by the Government, it is to be expected that there will be no further importations, except, possibly, small amounts of strong leaf from time to time.

CHARLES B. HARRIS, *Consul.*

NAGASAKI, *October 14, 1899.*

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<sup>1</sup>Consular Reports No. 230, November, 1899. Advance Sheets No. 525, September 11.

## PERSIA.

The importation of tobacco into Persia, compared with the vast quantity consumed, is very small. The Persians are probably more addicted to the habit of smoking than any other people, inasmuch as it is indulged in to an equal extent by both sexes, but the majority use the water pipe or narghilla, the tobacco for which is grown in the country. This, however, is a coarse quality and unsuited for the ordinary pipe, or the manufacture of cigars and cigarettes.

Within the last few years, there has been a considerable increase in the cultivation of a finer quality, closely resembling the old Virginian bird's-eye, which is used entirely for cigarettes. As this is grown in the provinces south of and bordering on the Caspian, much of it is exported to Russia and Turkey and used in the manufacture of cigarettes, with a superior kind grown in the latter country. As no advanced or improved methods are adopted in the culture of the plant, the quality produced is generally inferior in flavor and strength. Such as it is, however, it is used exclusively in the native manufacture of cigarettes. Cheapness is its one recommendation, though it has within the last five or six years risen more than 200 per cent in price. Notwithstanding its lack of aroma and delicacy of flavor, it still forms the chief article in this branch of the domestic trade.

No American tobacco is imported into Persia in the unmanufactured state. Considerable quantities, however, find their way to the markets in the shape of cigars, cigarettes, and the canned article for pipe consumption and cigarette smoking, but these are nearly all English or Dutch brands. Cigars are also imported from Manila by two or three firms. Many prefer these on account of their mildness and cheapness, but as the natives rarely smoke cigars the trade in these is small.

In view of the sweetening and flavoring which the tobacco undergoes at the hands of the manufacturers, and the variety of special and fancy trade names attached to the different firms' manufactures, as well as the divers kinds used in the "mixtures," it is impossible to assign them to any particular country or state of production. The following are some of these names: Virginia Mixture, Virginia Bird's-eye, Virginia Long Cut, Short Cut, Navy Cut, Honey Dew, May Blossom, Golden Valley, Richmond Mixture, Morning Cloud, etc. All of these are, no doubt, mixtures, and prepared to suit different tastes. As the importers of tobacco into Persia are all dealers, and have no connection with the manufacture, their only interest consists in finding such qualities as satisfy the demands of the market and secure ready customers.

It does not appear that, up to the present time, either cigars or tobacco have, as a matter of business, ever been imported into Persia directly

from America. This is to be regretted, for not only is the purity of the article tampered with, but the cost to the consumer is largely increased. If American cigarettes could be put on the market at a price to compare favorably with the homemade article, they would, no doubt, command a large sale.

No reliable statistics are forthcoming as to the extent of the tobacco import trade into Persia, but it is, no doubt, on the increase.

The Teheran importers are the Toko, a Dutch firm; "The Comptoir Française," a French firm, and the "Indian Store," an Armenian firm, but now being wound up. If any manufacturer or merchant should wish to bring his goods to the notice of the Teheran consumer, it would be advisable to send a small sample to either of the two first-mentioned firms, or to Mr. Joh. Pater, a commission agent in Teheran, who gives most of his time and attention to American business.

This branch of our productive industry, if entered upon with some spirit of enterprise, should command a considerable measure of success in Persia, and is not one in which a large capital need be invested in order to test the market. As stated in the beginning of this report, the natives are great smokers; and as the water pipe is gradually giving way to the cigarette, the time for claiming a share in the trade is opportune. It should, however, be borne in mind that, as our merchandise appeals to the taste of the wealthier portion of the community, goods of a superior kind should be put forward as samples of what can be provided. Goods of a mediocre and worthless description are here in abundance. Our dealers should pack very carefully all their exports to Persia, and should avoid as much as possible doing any business here on long credits.

HERBERT W. BOWEN,  
*Consul-General.*

TEHERAN, *October 11, 1899.*

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## STRAITS SETTLEMENTS.

There are no imports of unmanufactured (leaf) American tobacco into these colonies.

The importers are dealers, not manufacturers. Boustead & Co., Guthrie & Co., Behn Meyer & Co., Katz Brothers, Limited, John Little & Co., Limited, and McAlister & Co. are the principal firms.

There appears to be no fault found with the packing or quality of American tobaccos imported.

The total import of manufactured tobacco in 1898 aggregated 3,002 piculs (400,266 pounds), valued at \$433,371 Mexican (\$198,484), of which New York only accounted for 274 piculs (36,533 pounds), of the value of \$14,701 Mexican (\$6,733), into Singapore, and none into

Penang, the balance being from the United Kingdom; from which it will be seen there is a large market for this product in this district, and, in my opinion, our manufacturers should send out travelers with samples to represent them and to study the local requirements.

It must be borne in mind, however, that most if not all of the manufactured tobacco imported from the United Kingdom is of American origin, and it becomes simply a question of price. If bright "Virginia," for cigarette and smoking, packed in fancy tins, could be offered at 1 shilling 8 pence per pound, cost, freight, and insurance to Singapore, a large business would without doubt result.

R. A. MOSELEY, Jr.,

*Consul-General.*

SINGAPORE, *October 19, 1899.*

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#### TOBACCO GROWING IN THE PHILIPPINES.

Consul-General Moseley sends from Singapore, September 27, 1899, an extract from the Singapore Times in reference to tobacco growing in the Philippines.

The Englishman referred to, says Mr. Moseley, is personally known to him, and he considers his statements reliable.

The article reads:

Mr. Velge, an Englishman, has been testing the soil of northern Luzon as to the possibility of growing Sumatra tobacco, and has conclusively proved that its introduction is practicable. Mr. Velge had previously been engaged in tobacco planting in Sumatra, where the soil would produce a crop only once in seven or eight years. In the experiments he made in the provinces of Cagayan, Isabella, and New Biscay, he found that the soil would grow a crop every year, producing a leaf 15 inches in length. It was even ascertained that the new soil was too rich, and that the old soil that had been under cultivation for some years produced a thinner and stronger leaf. Although the experiments were so eminently successful, the wholesale cultivation of the Sumatra leaf was never undertaken, because of the obstructive policy of the Spanish régime. Mr. Velge estimates that 1 acre of this ground will produce from 6,000 to 10,000 plants, or trees, as they are technically termed. One native is considered capable of planting and harvesting 1 acre. He is paid for his services in the cultivation of Manila tobacco about \$10 Mexican (\$4.73) for every 100 pounds of tobacco that is accepted by the warehouses. This means an income for him throughout the year of about 25 cents Mexican (11.9 cents) per diem.

## AUSTRALASIA.

### NEW SOUTH WALES.

The total importations of tobacco, etc., into this colony for the year ended December 31, 1898, were as follows:

| Description.                   | Quantity.      | Value.              |
|--------------------------------|----------------|---------------------|
|                                | <i>Pounds.</i> |                     |
| Tobacco (unmanufactured) ..... | 1,315,498      | £41,021 = \$199,363 |
| Principally from—              |                |                     |
| United Kingdom .....           | 248,915        | 6,088 = 29,345      |
| United States .....            | 984,032        | 31,058 = 150,941    |
| Tobacco (manufactured) .....   | 1,459,486      | 105,045 = 510,519   |
| Principally from—              |                |                     |
| United Kingdom .....           | 94,201         | 8,438 = 41,009      |
| United States .....            | 1,114,836      | 76,961 = 374,031    |
| Cigars .....                   | 298,768        | 77,476 = 376,534    |
| Principally from—              |                |                     |
| Hongkong .....                 | 27,546         | 3,589 = 17,443      |
| Germany .....                  | 107,270        | 13,357 = 64,916     |
| United States .....            | 4,790          | 4,040 = 19,635      |
| United Kingdom .....           | 10,715         | 8,541 = 41,510      |
| Cigarettes .....               | 173,873        | 49,234 = 239,278    |
| Principally from—              |                |                     |
| United Kingdom .....           | 38,511         | 10,330 = 50,204     |
| United States .....            | 121,392        | 34,078 = 165,595    |

The duty on unmanufactured tobacco is 24 cents per pound, if entered for local manufacture; otherwise it is the same as on the manufactured, viz, 75 cents per pound. The duty on cigars and cigarettes is 6 shillings (\$1.46) per pound.

At the close of the year 1898, there were in operation in the colony 9 tobacco factories and 14 establishments for the manufacture of cigarettes, and during the year mentioned they consumed 1,224,919 pounds of locally grown and 1,110,751 pounds of imported leaf, producing 2,081,260 pounds of tobacco, 21,678 pounds of cigars, and 232,732 pounds of cigarettes.

I am informed that practically the whole of the leaf imported into the colony is "Virginia," and that importers manufacture to suit their own requirements.

The chief importers of leaf in the colony are the American Tobacco Company of New South Wales (cigarette manufacturers), Sydney; New York and Brooklyn Tobacco Company (factory), Sydney; Cameron Bros. & Co. (factory), Sydney; Dixon Sons & Co. (factory), Sydney; Heyde Todman & Co. (importers of manufactured tobaccos), Sydney; Hoffnung & Co. (importers of manufactured tobaccos), Sydney; Sutton & Co. (importers of manufactured tobaccos), Sydney.

Almost the whole of the tobacco used in cigarette manufacturing is "Bright Virginian."

The popular brands of imported cigarettes are "Cameo," manufactured by the American Tobacco Company, and the "Three Castles," manufactured by W. B. & H. O. Wills, of Bristol, England. These

brands are retailed at 12 cents per package of 10, while the brands of local manufacture are retailed in similar-sized boxes at 6 cents.

RICHARD T. O'ROURKE,  
*Vice-Consul.*

SYDNEY, *October 24, 1899.*

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## NEW ZEALAND.

The total imports for the year 1898 were: Leaf tobacco, 62,432 pounds; value, £2,822 (\$13,733). The United States contributed 37,701 pounds, the value being £1,574 (\$7,660). Most of the tobacco from the States was what is known as "Virginias." The consumption of tobacco per head in New Zealand, including "Maoris," is 2.18 pounds. There is a customs duty on leaf tobacco of 2s. (48 cents) a pound. The total imports of manufactured tobacco for the period above mentioned were 1,417,576 pounds, with a value of £105,579 (\$513,800). Of this, the United States contributed 1,183,368 pounds, valued at £82,855 (\$403,214). Total amount of cigars imported was 77,497 pounds, valued at £21,805 (\$106,114). Of this, the United States sent 90 pounds, valued at £115 (\$560). The customs duty on cigars is 7s. (\$1.70) per pound. The total importations of cigarettes were 137,372 pounds, and the value was £31,414 (\$152,876). The United States' share was 102,105 pounds, valued at £20,507 (\$99,797). The duty on cigarettes is 17s. 6d. (\$4.26) per 1,000.

The only importers of leaf tobacco are the American Tobacco Company of New Zealand and Walsh & Co. They are principally dealers, but manufacture to a limited extent. I hear of no faults in the qualities of the tobacco imported, nor in the packing of the same.

FRANK DILLINGHAM, *Consul.*

AUCKLAND, *November 6, 1899.*

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## VICTORIA.

Fully 80 per cent of the manufactured and unmanufactured tobacco consumed in Victoria is American, and our smoking tobaccos may be said to have absolute command of the market. The classification of American tobaccos as "Virginias" and "Western" is not known to the trade here, but I am informed by one of the largest dealers that Tennessee, Kentucky, and heavy Ohio tobaccos form a very small portion of the imports from the United States.

During the year 1898, the importation of manufactured tobacco into the colony amounted to 1,791,799 pounds, valued at \$548,492, of which the bulk was American. During the same period, the imports of

unmanufactured tobacco amounted to 1,244,120 pounds, valued at \$236,120, of which 937,754 pounds were imported from the United States. Of the balance, 150,378 pounds were from Great Britain, two-thirds of which probably also consisted of American leaf. This would mean about 1,038,000 pounds, out of a total of 1,244,000 pounds of unmanufactured tobacco imported, equivalent to 83 per cent. The quantity of unmanufactured tobacco on which duty was paid during 1898 was 970,382 pounds, leaving about 22 per cent of the imports unaccounted for. Probably most of this is the loss in weight occasioned in stemming the tobacco when manufacturing, as fully two-thirds of the tobacco is not stemmed until after arrival here. This 22 per cent may also be accounted for in part by export in bond or by the stocks in Victoria having accumulated in bonded warehouses. In any event, it would not materially change the percentage, as it would probably affect imports from other countries in the same proportion. As the American tobaccos imported into the colony are used only for smoking and cigarettes, a comparison in quality with foreign tobaccos can not be made, the other tobaccos consisting of cigars, Egyptian and Turkish cigarettes, etc.

The qualities of American tobaccos vary considerably, according to what they are used for, and the prices vary also. There are few tobacco importers here who are merely dealers. The larger manufacturers all import for their own requirements, occasionally buying a small line in the local market for some special reason, such as shortage of stock, color for blending, or on account of cheapness. The smaller manufacturers buy principally from dealers. The principal dealers who are not manufacturers are Couche, Calder & Co., 127 William street, Melbourne; Zwicker, Tod & Co., 29 Niagara lane, Melbourne; J. Kronheimer & Co., 340 Flinders lane, Melbourne.

The principal importers among the manufacturers are American Tobacco Company of Victoria, Limited, 217 a'Becket street, Melbourne; Wm. Cameron Bros. & Co., Proprietary, Limited, 14 a'Becket street, Melbourne; Dudgeon & Arnell, Proprietary, Limited, 524 Lonsdale street, Melbourne; A. Gross & Co., Proprietary, Limited, 225 Queen street, Melbourne; Jacobs, Hart & Co., 225 Queen street, Melbourne; Moss, White & Co., 219 a'Becket street, Melbourne.

Most of the importers have been dealing for years with the same shippers in the United States and have instructed them exactly as to their requirements, so that the trade runs along very smoothly and uniformly. The manufacturers who import place absolute orders with their correspondents in the United States. The dealers who import receive some consignments besides their regularly placed orders. When the consignments are made by houses new to the export trade, they are frequently unsatisfactory through not being packed sufficiently firmly, and in packages strong enough to stand the

journey. The packing of American tobacco as a whole is very satisfactory, and compares more than favorably with that of other tobacco imported here.

No practical suggestion can be made which would be likely to benefit the export of tobacco from the United States to this market. The quantity of American tobacco used for manufacturing in Victoria is increasing and will further increase. This must necessarily be at the cost of the American manufactured tobacco now being imported. The factories here are becoming larger every year, and the leaf grown in this country is not satisfactory, except for inferior tobacco. Government assistance to the industry has so far effected very little improvement.

JOHN P. BRAY, *Consul-General*.

MELBOURNE, *November 30, 1899.*



# CIGAR AND CIGARETTE INDUSTRY IN LATIN AMERICA.

## DEPARTMENT INSTRUCTION.

DEPARTMENT OF STATE,  
Washington, September 20, 1899.

*To Consular Officers of the United States in Latin America.*

GENTLEMEN: Since the Department's circular instruction of August 30, 1899, in regard to the American tobacco export trade was issued, the United States Export Association has requested the Department to secure statistics covering the cigar and cigarette industry in Latin America.

The information desired by the Export Association is embraced in the following interrogatories:

1. Amount of cigars and cigarettes made per year in your district.
2. The principal centers of the industry.
3. The import duty on cigar and cigarette machinery.
4. Are there any peculiarities in the levying of this duty?
5. Is any particular style of marking and packing such machinery necessary?
6. Is there any Government monopoly of the cigar and cigarette trade?
7. Who are the principal manufacturers of cigars and cigarettes in your district?
8. What is the output of the principal factories, the number of hands employed, the number of machines used, and the wages paid?
9. What method of manufacture is used for cigars? Is the team-work system employed, or does one workman make the whole cigar?
10. Do they use cigar molds? What other tools are generally used?
11. Are cigar molds and tools imported or manufactured locally? If the former, whence imported, names of manufacturers, prices, etc.

The reports in answer to this circular will be kept separate from the leaf-tobacco reports, which were requested from a few only of the consular officers in Latin America.

You are requested to make the necessary inquiries into the subject of this circular and report, with a view to publication, at your earliest convenience.

I am, sir, your obedient servant,

ALVEY A. ADEE,  
*Acting Secretary.*

## MEXICO.

Vice-Consul-General Hardy writes from Mexico City, December 6, 1899:

The cigars and cigarettes made in the Republic of Mexico during the year ended June 30, 1899, were: Cigars, 607,592 kilograms (1,339,497 pounds); cigarettes, 4,915,730 kilograms (10,837,218 pounds).

The principal centers of the industry are, for cigarettes, Mexico City, District Federal, Sinaloa, Michoacan, Guanajuato; for cigars, Veracruz, Puebla, and Mexico, District Federal.

The import duty on cigar and cigarette machinery (steam) is 1 cent per kilogram (.47 cent per 2.2046 pounds). There are no peculiarities in the levying of this duty nor is there any particular style of marking and packing machinery.

There is no Government monopoly of the cigar and cigarette trade.

The principal manufacturers of cigars and cigarettes in this district are, for cigars: Basogoiti Zaldo & Co., Mexico city; B. Garcia, Mexico city; Balsa & Bro., Puebla; M. Penichet & Co., Puebla; Manuel Orozco, Oaxaca; Gabriel B. Cruz, Guadalajara; Amado Delgado, Guanajuato; Antonio Morfin & Co., successors, Aguascalientes. For cigarettes: Ernesto Pugibet, Mexico city; Noriega, successors, Mexico city; M. Penichet & Co., Puebla; Manuel Orozco, Oaxaca; Gabriel B. Cruz, Guadalajara; Amado Delgado, Guanajuato; Antonio Morfin & Co., successors, Aguascalientes; Villa Brothers, successors, Orizaba.

The output of the principal factories varies greatly. The number of hands employed ranges from 300 to 400 men and boys in the larger cigar factories and from 30 to 50 men and boys in the smaller factories. In the largest cigarette factory there are employed something like a thousand women and girls, and the smaller cigarette manufacturers employ a correspondingly smaller number of women laborers. The wages paid for cigar makers run from \$1 to \$5 per day, and the cigarette makers earn from \$1 to \$3 per day, in accordance with their experience, skill, and industry.

Cigars are hand made, no molds being used. One man makes the whole cigar.

The only cigar tools used are cutters or knives, some of which are made in the city of Veracruz, and others are imported from the United States and from Germany. They are generally of cheap manufacture.

Consul Mills, of Chihuahua, under date of December 6, 1899, says: There is only one manufactory of cigars in this district, and that is such a small one that it would not justify description.

There are no factories of cigarettes in the district, and but little tobacco is grown. The cigars and cigarettes consumed here come from the more southern portions of the Republic.

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Consul Kindrick reports from Ciudad Juarez, September 28, 1899, that tobacco is not grown in that part of Mexico, nor is there a cigar or cigarette factory in his district.

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The following has been received from Consul Kaiser, of Mazatlan, dated October 20, 1899:

The number of cigars made per annum in my district is 1,900,000; of cigarettes, 17,500,000.

The principal center of the industry is Mazatlan.

The principal manufacturers are Sór Antonio Diez Leon & Co., Sór Francisco Montero & Co., and Sór Rafael Millan & Co.

About 730 people are employed, mostly women and girls. No machines are used. Men earn \$4 (\$1.90)<sup>1</sup> for every 3,000 cigars made; women and girls receive 25 cents (11.9 cents) for every 1,200 cigarettes. Thus the men earn from \$12 to \$15 (\$5.71 to \$7.14) per week, and the women and girls earn, respectively, \$5, \$6, and \$8 (\$2.38, \$2.86, and \$3.80) a week, according to work performed.

No cigar molds are used. A hand knife is employed for smoothing the head of the cigar.

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Under date of Monterey, December 2, 1898, Vice-Consul-General Carroll says:

There are two or three small cigar factories in the State of Nuevo Leon, the output of which is so small that it is unworthy of note. There are no cigarettes manufactured save the so-called corn-husk variety.

Certain cigar and cigarette factories are exempt from taxation for machinery.

There is no government monopoly. The Government derives its revenue through stamps.

Under date of October 7, 1899, Consul Towle, of Saltillo, writes:

The consular district of Saltillo is located in the Sierra Madre Mountains. No tobacco is grown within its limits. There are no cigars

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<sup>1</sup> Mexican dollar of 1899 equals 47.6 cents.

made by machinery or hand, and there are no cigarettes made otherwise than by hand in this district.

The only cigarettes which are produced are the cornshuck cigarettes for local consumption. There are in Saltillo about a dozen houses where these cigarettes are made, from three to fifteen girls being employed at each place. The production covers the local demand for this class of goods, and the surplus is disposed of in near-by towns. It is not possible to estimate the total output.

It may be a matter of interest to state that the tobacco used in the manufacture of these "shuck" cigarettes is imported from the United States in the leaf. It is what is known as "black" tobacco, and two firms—one in Louisville, Ky., the other in New Orleans, La.—supply practically all that is used.

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Consul Canada, of Vera Cruz, March 13, 1900, says:

Vera Cruz is the principal center of cigar manufacturing in this consular district, if not in the Republic of Mexico. However, in other towns, like Orizaba, Jalapa, Tlacotalpam, etc., there are a few factories. The principal cigar factories are the following: In Vera Cruz, "La Prueba," owned by Balsa & Hno.; "La Perla" and "La Industrial," owned by Madrazo & Córrales; "La Rica Hoja," owned by Manuel P. Garcia; "El Arte," owned by Capdevila Hnos., successors, "El Destino," "La Nacional," and "La Union," owned by L. & H. Pinto, Limited; "La Union Nacional," owned by Antonio Blanco; "La Ilusion," owned by Maus & Orropesa, and "La Hoja de Oro," owned by Alfons Brosting; in Orizaba, "La Violeta," and "La Seductiva," owned by Maximo Hirsch, and "El Moro Nuzo," owned by Villa Hnos.; in Jalapa, "El Valle Nacional," owned by E. Gabarrot & Co.; in Tlacotalpam, "La Muestra," owned by Jose A. Silvaran. Each factory makes from 25 to 100 different brands of cigars, ranging in price from \$25 to \$300, Mexican currency (\$11.72 to \$140.70), and in weight from 7 to 20 pounds per mille. Many of these factories also make cigarettes, but mostly cheap brands. The principal cigarette factories in the Republic, especially of the better grades, are located in Mexico City, and a few in Puebla.

The total output of cigars in this consular district is estimated at 90,000,000, and cigarettes at 30,000,000 per year; yet, as there is not a village or town in this district where cigars are not made on a small scale—perhaps half a dozen kinds, and sold at retail or in very small quantities—the total production of cigars from all sources may safely be estimated at 120,000,000 a year.

As there is at present no government or private monopoly of the cigar or cigarette trade, the manufacturing is free. However, each factory has its name (La Prueba, La Violeta, etc.) registered, and any

attempt to sell under such name would be to violate the law. Cigars are subject to an internal-revenue tax of \$2.50, Mexican currency (\$1.17), per mille, which duty has to be paid by affixing the amount in revenue stamps to the box or wrapper, in such a way that the stamp is broken when the box or wrapper is opened. This revenue law is, however, often evaded by those making cigars at home, as they seldom use wrapping or boxes, but sell their output loose or tied in bundles.

About 60,000,000 cigars may be estimated as the output of the principal factories of this city, and 2,000 workmen are employed, whose wages amount to some \$1,000,000, Mexican currency (\$469,000), a year. The majority of the laborers employed are Cubans, but native men and women are commencing to learn the trade, and the time may not be far off when they will supplant the others.

The method of manufacture is for the workman who commenced it to complete the cigar. However, a few factories have recently been trying to introduce the team system. Very few machines are used, the imports coming from the United States. Molds are also very seldom employed. Wooden measures, known in Spanish as "cepos," and a knife called "chaveta," are about the only tools, and most of them are made here and are very crude.

Customs duties on cigar and cigarette machinery are 5 cents (2.3 cents) per kilo (2.2 pounds), gross weight, if hand power, and 1 cent, if steam power, with 10½ per cent additional on the gross amount of duty. No particular style of marking and packing such machinery is necessary or required, nor are there any peculiarities in the levying of duty.

## BRITISH HONDURAS.

Consul Avery writes from Belize, October 5, 1899:

The manufacture of cigars in this colony is confined to a few Spaniards, who make by hand an unknown, but at the most a very small, quantity of the cheapest cigars. No cigarettes are made. The duty on cigars is \$6 per 1,000 and there is no internal-revenue tax, as in the United States, so that there is little incentive to the industry, for as it stands now excellent cigars can be imported, from Mexico particularly, cheaper than if made in Belize. The duty on cigarettes is 75 cents per 1,000, and as before stated, there are none made here. I can not find that even molds are used, nor is it likely that any machinery for cigar manufacture will be introduced for many years.

## COSTA RICA.

Consul Caldwell sends the following from San José, November 28, 1899:

It is not possible to give the number of cigars and cigarettes made per year, as no statistics bearing on this point are kept.

San José is the chief center of the cigar and cigarette industry.

Machinery for making cigars and cigarettes pays duty at the rate of 2 cents a kilogram, Costa Rican currency (.9 ct. per 2.2046 pounds), gross weight. There are no peculiarities in the manner of levying the duty.

There has been since August, 1898, a fiscal monopoly of cigarettes, cigars, snuff, and tobacco to be cut into cigars and cigarettes. This monopoly, however, has not been granted to any particular person or firm; anyone is free to import by paying the duty.

There is but one manufactory of cigarettes supplied with machinery. This is called "La Vencedora," and is not now in operation, owing to the large stock of manufactured tobacco on hand. Besides, there are many places—cigar stores, etc.—where cigars and cigarettes are made by hand.

"La Vencedora" employs a force of 9 operatives, 3 men and 6 women. One of the men, the manager, receives \$150, Costa Rican currency (\$69.75 U. S. currency), per month. The other two earn \$70 and \$60 (\$32.55 and \$27.90), respectively. The women are paid an average of \$1.25 to \$1.50 (\$0.58–0.69) a day for piecework in making up the bundles. With the present force 500 bundles of 10 cigarettes each are made per day, but with an increased force 150,000 cigarettes a day could be made. As previously stated, no statistics being kept of such production, no estimate can be made of the number of cigars and cigarettes made by hand, nor of the number of persons employed in the general industry.

"La Vencedora" has 5 machines, besides a motor.

Molds are not used.

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HONDURAS.

Consul Johnston, of Utila, under date of October 10, 1899, says:

There are no cigars or cigarettes manufactured in this consular district. What cigars are used are made at Santa Rose and Santa Barbara, and sell at from \$2 to \$5 per 1,000.

## NICARAGUA.

Consul Donaldson writes from Managua, November 27, 1899:

It is impossible to make any exact estimate of the number of cigars, etc., made, as there are no factories, and everyone who desires to increase his income occupies his spare hours making "pures," or cigars, which are sold here at less than 1 cent each, or about three for 1 cent in United States currency. There is no license required for this, and consequently no way of estimating the quantity thus made and sold. All work is done by hand and hardly any machinery is used. There is no duty on machinery, and no particular style of marking and packing it is required.

No fine cigars or cigarettes are made in the country. All are of poor and cheap tobacco. All good cigars and cigarettes are imported from Mexico, Jamaica, and Cuba.

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## SALVADOR.

Consul Jenkins, of San Salvador, November 10, 1899, writes:

The quantity of cigars and cigarettes consumed in Salvador can only be estimated on the basis of a population of 700,000, two-thirds of whom smoke more or less. There is no Government monopoly nor internal-revenue tax.

All cities contain one or more manufacturing establishments where cigars and cigarettes are made, as a rule in connection with some other line of business. The principal centers are San Salvador, with the following firms: Phenix, capacity, 5,000 cigars per day; present output, 1,000; cigarettes, 15,000 per day; present output, 5,000; has two French machines for making cigarettes (not used); José Carrera, capacity, 20,000 cigarettes; output, 7,500; Coutepeque Josefa Gomez de Diaz, capacity, 4,000 cigars.

There is no machinery used in the making of the cigar; it is hand-made; no team work. In many instances the grower of tobacco manufactures his own cigars. The women monopolize the work. An expert can make 300 cigars a day, but the average is 200. They receive from 40 to 50 cents per 1,000, and noonday meal.

No greater quantity is manufactured than is necessary for the daily consumption, on account of the damages caused by the tobacco worm.

Machinery is subject to a duty of 25 cents per pound.

## ARGENTINE REPUBLIC.

Consul Ayers, of Rosario, under date of November 14, 1899, says:

I find it difficult to obtain from the manufacturing concerns on whom I have called the data to enable me to answer the queries contained in the circular of September 20. This indisposition to answer questions as to the details of their business seems to be based on a fear of competition rather than on a lack of willingness to furnish the information desired. From what I have been able to obtain I submit the following:

The number of cigars made in my district annually is about 12,000,000, and of cigarettes about 18,000,000 packets of ten each.

The principal center of the industry is Rosario.

The import duty on the necessary machinery is, on importations of \$100 gold value or less, 25 per cent ad valorem; on all exceeding \$100 gold value, 10 per cent ad valorem.

There are no special peculiarities in the levying of this duty, and no particular style of marking and packing such machinery is necessary.

At present there is no Government monopoly of this trade, though I am informed that one is proposed.

The principal manufacturers of cigars are Messrs. Testoni, Chiesa & Co., of this city. There are many small manufacturers throughout the district, whose productions can only be estimated. The chief manufacturers of cigarettes are Testoni, Chiesa & Co., and Urtubey, Sagales & Co., of this city.

The output of Testoni, Chiesa & Co. is, of cigars, 6,000,000 annually, and of cigarettes 12,000,000 packets annually. That of Urtubey, Sagales & Co. is, of cigarettes, 3,000,000 packets annually; no cigars made. Testoni, Chiesa & Co. employ from 250 to 300 hands, and Urtubey, Sagales & Co. about 80. Wages run from \$100 to \$200 paper (equal to \$42.50 to \$85 United States gold) per month. The former firm has nine American cigarette machines and four (locally made) cigar machines, and the latter firm has four English cigarette machines.

The team system is not employed with cigars. One person makes the whole article.

For cigars, molds and rollers are used. These are made here entirely.

## CHILE.

Consul Greene, of Antofagasta, under date of November 4, 1899, writes:

There are no statistics as to production, and any estimate would be mere conjecture. Some 30,000 people in this district smoke cigarettes and perhaps 4,000 smoke cigars.

The centers of manufacture are Antofagasta, Taltal, and Tocopilla; in the mining camps, also, cigarettes are made.

The duty on cigars is \$6 (equal to \$2.19 gold) per kilo; on cigarettes, \$9 (\$3.82 gold) per kilo.

All shops pay what is called a "patente," equivalent to our internal-revenue tax.

It is roughly estimated that from 150 to 300 men are employed in making cigarettes, according to demand. They are paid \$2.25 (82 cents gold) for each package of 100 papers of 15 cigarettes, and can make from 120 to 130 packages per day.

The workman, as a rule, makes the whole cigarette. Only the simplest tools are used.

In 1898, only 4 kilos (8.8 pounds) of foreign cigarettes were imported into this district. From home ports, coast trade, the value of imports reached \$75,770 (\$27,656 gold).

Cigars to the amount of 162 kilos (357 pounds) were imported from foreign ports and from home ports, coast trade, to the value of \$62,656, or \$22,656 gold.

In the mining camps, and to a less extent in the towns, people prefer to buy the prepared tobacco and make up their own cigarettes.

Consul Merriam sends the following from Iquique, November 13, 1899:

There are but two establishments in this district where cigars and cigarettes are made by machinery. There are in this city and Pisagua a considerable number of small manufacturers of cigarettes, but as their total output is insignificant, I have not taken them into account.

One of the two factories referred to (both of which are located in Iquique) produces cigarettes only; the other is beginning the manufacture of cigars also, and for the present no particulars can be given as to the production of the latter.

The two factories turn out annually 5,800,000 packets of cigarettes of 20 each.

The firms are Messrs. Olivo & Capella and Messrs. Hernandez y Bumiller, of this city. The former factory is known as "La Sociedad manufacturer a de Tabacos," and the latter as "La Cubana."

There is no import duty on cigar and cigarette machinery. It is safer to pack the machinery "knocked down," when it can be done, and great care should be taken to secure absolute immobility of the different parts, not overlooking small pieces, which, if not well secured, may cause damage to the other parts.

The net and gross weights in kilos should be placed on each package.

In the two factories mentioned, there are in use 20 machines for the different processes, from the cutting of the leaf to finishing the packets ready for the market, besides 20 small hand machines. Four engines, horizontal and vertical, from 2 to 12 horsepower, are also employed.

According to the method now employed, one man makes the whole cigar.

Most of the tools used are of United States manufacture. Names and prices can not be furnished.

There are employed in the factories 2 mayordomos, one assistant mayordomo (earning, respectively, \$200 and \$120 per month in Chilean currency, at variable rates of exchange, from 28 cents to 36 cents to the dollar); 2 mechanics, at \$220 and \$200; 9 women, who earn \$1.20 per day, and 41 men and boys, who earn daily \$2.50 and 60 cents, respectively.

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Consul Caples writes from Valparaiso, January 17, 1900:

As cigars and cigarettes made in Chile do not pay any duty or tax, no record is kept of the number made per year.

Santiago (the capital) and Valparaiso are the centers of manufacture.

No duty is levied on any kind of machinery used in making cigars and cigarettes.

Machinery can not be too carefully packed to avoid breakage in transshipping and landing.

Some years ago (say eighteen) the Government had a monopoly of the import and sale. Now, any person may import or manufacture tobacco, cigars, or cigarettes, upon paying the small sum exacted yearly as a license. All businesses pay licenses.

The chief firms in Valparaiso are: La Corona, Compañía General de Tabacos; La Belleza, Roldan y Compañía; El Pensamiento de Cuba, Manuel Dominguez; La Constancia, Francisco Bettancourt; El Nuevo Pensamiento, Vieytes Hermanos, and Compañía Sud Americana de Tabacos. In Santiago is La Rosa Habanera, Juan Bautista Echeverria. The above are the principal makers, but many thousands are occupied making cigars and cigarettes in their own dwelling houses, as well as in factories. In most cases the workmen are paid by piecework.

The Compañía Sud Americana de Tabacos employs 40 workmen, runs 7 cigarette machines (Bonsack) made in France, and produces 5,000 packets (of 15 cigarettes each) daily, or 3,000,000 packets yearly. Chilean tobacco is used. The cigarettes are gummed and cut at ends.

The Compañía General de Tabacos employs 60 workmen, runs 7 machines (Comas) made in the United States, and can turn out 50,000 cigarettes per hour. The cigarettes of this company resemble hand-made goods, are not gummed, but are turned in at the ends. This make is preferred to that of any other machines.

Cigars are generally begun and finished by the same man or woman, although in a few places the team system is employed.

In the principal factories, or those employing more than 10 workmen, molds, presses, stamps, and box-nailing machines are used.

Cigar molds, stamps for boxes, boxes, tickets, and rings are nearly all imported from Germany, being cheaper than the same goods from the United States, on account of the higher freights, shipping expenses, and insurance rates, as well as the higher cost in the United States.

It is evident that with the present prohibitory custom duties on cigarettes of \$9 gold (specific) per kilogram (\$3.28 United States currency, per 2.2046 pounds), none can be imported from the United States or any other country.

## THE GUIANAS.

Consul Moulton sends the following from Demerara, October 25, 1899:

Only three small cigar factories exist in the entire district, two in this city and one in Paramaribo, Dutch Guiana. The annual output is variable, never exceeding more than 600,000 in any one year. Not more than 16 hands are ever engaged in making cigars. One workman makes the entire cigar, from 24 to 60 cents per hundred being the price paid. E. G. Fonseca and H. Paddenburg are proprietors respectively of the Endeavor and the Mercurious factories in Georgetown. The latter is also the proprietor of the concern in Paramaribo.

Cigar molds and presses and American trip cutters are used. The molds are imported from Germany at \$1 each. The duty on machinery used in this industry is 10 per cent ad valorem. The style of packing and marking is not peculiar. No cigarettes are manufactured in the district. The Government is not engaged in the business.

This incipient industry, notwithstanding its protection by heavy duty, has never been able to compete with the imports of Kentucky black, fat tobacco or the regulation cigarette.

The following figures of import will indicate the volume of the trade in manufactured tobacco in the colony for the year ended March 31, 1899:

| Countries.                 | Quantity.      | Value.      |
|----------------------------|----------------|-------------|
|                            | <i>Pounds.</i> |             |
| United Kingdom.....        | 57,897         | \$30,367.06 |
| British West Indies.....   | 130            | 66.60       |
| British North America..... | 230            | 84.75       |
| Hongko g.....              | 451            | 92.50       |
| France.....                | 11             | 2.00        |
| United States.....         | 491            | 146.64      |
| Total.....                 | 59,210         | 30,759.54   |

W. D. and H. O. Wills, of Bristol, England, control this market in cigarettes. Their prices are \$1.44 per 1,000, less 5 per cent commission to the importer. The cigarettes are covered with oiled paper and

put up in small tins containing 50 cigarettes, 400 cigarettes to the pound. They are retailed at 48 cents per tin. Another size tin, containing 10 cigarettes, is sold for 12 cents, costing in Bristol \$3 per 1,000. The duty on cigars and cigarettes is \$1.80 per pound.

## PARAGUAY.

Under date of November 24, 1899, Consul Ruffin writes from Asuncion:

The cigarette industry is in its infancy in Paraguay, the most attention being given to cigar making. The number of cigarettes made last year amounted to 4,434,500. In 1899, up to November 18, the number was 5,464,200, so that from this it can be seen that cigarette smoking is on the increase. The foreigners heretofore have been the principal cigarette smokers, the Paraguayans preferring cigars.

There are three centers for cigar making—Asuncion, Villa Rica, and Carapeguá. The principal company making cigarettes is Juan Sosa y Cía., of Asuncion.

There is no import duty on machinery and no particular style of packing cigarette machinery. There is no Government monopoly of the cigarette trade.

There are not more than two large machines in the country for making cigarettes.

The principal manufacturers of cigars are "Papa Lucre," Villa Rica; Portiello y Cía., Carapeguá; Juan Sosa y Cía., Asuncion; Lopez y Cía., Asuncion; Belisario Gaepe, Asuncion; Trocleam y Cía., Asuncion. Of cigarettes, Juan Sosa y Cía., Asuncion, and Trocleam y Cía., Asuncion.

It is impossible to estimate the output of cigars, as no internal duty is levied on them. One cent is placed on each box or package of cigarettes.

Only handmade cigars are consumed here. The largest factory employs 28 hands. Cigar molds and tools are not imported, all cigars being made by hand, as labor is so cheap.

## URUGUAY.

Consul Swalm, of Montevideo, November 3, 1899, says:

About 7,000 kilos of (15,432 pounds) tobacco are used monthly in making cigarettes. The annual output of cigars averages 15,000,000. The tobacco used averages from 80,000 to 90,000 kilos (176,376 to 198,423 pounds) per month, according to the tax returns. The principal center of manufacture is Montevideo, but handmade cigarettes

(individually made) and cigars are produced all over the country, the latter in small shops, wherever a local demand exists.

The import duty on cigarette or cigar machinery is 38½ per cent. There is no peculiarity about levying the same. The machinery requires the very best of packing—not too heavy, but very secure. It comes in the unclassified list, and the duty is on the valuation, which the custom-house here makes.

There is no Government monopoly of tobacco manufacture, but all makers must have a “patente” or license tax certificate.

Mr. Julio Mailhos is the principal manufacturer. He has two American cigarette machines, and is putting in a Belgian cigar-making machine. At present, there is no cigar-making machine running in the country.

Team work and single-turn labor are employed in cigar making, and molds are generally used, chiefly German ones. Almost all the tools and machinery employed are imported, and these comprise the regular German and Belgian makes. Prices vary so much that they can not be given, and makers are averse to naming the cost of their plants for the apparent reason that prices are not maintained evenly with all buyers. All American appliances of special character find ready copyists in the countries named, and this is not only true of tobacco machinery, but of everything that can find a market in South America.

The annual tax, called “internal tax,” shows an average return for the past two years of \$467,000 gold. The duty on cigars imported is fixed at from \$1 per kilo (2.2046 pounds) for the common sorts of tobacco to \$3 per kilo for best Habana, upon which there is also levied a special port tax of 7½ per cent on a valuation of from \$1 to \$4.50 per kilo. In addition comes the internal-tax revenue, which almost prohibits the importation of cigars and cigarettes. The kilo rate governs cigarettes.

## VENEZUELA.

Consul Plumacher writes from Maracaibo, November 1, 1899:

From \$300,000 to \$350,000 worth of cigarettes and from \$6,000 to \$8,000 worth of fine cigars are made here annually. Ordinary cigars are also widely manufactured. The principal centers of the industry are Caracas, Puerto Cabello, and Maracaibo. The principal manufacturers are Francisco de P. Guerra & Co., Simon Pietri Co., Julio L. Garcia, and Perez & Morales, in Caracas, and German del Gallego, Edo Vargas, R. Bohorguez, and Rafael Belloso B., in Maracaibo.

Cigar and cigarette machinery is admitted free, if exemption from duty is requested at Caracas. It should be marked and packed in

accordance with the custom-house rules as to importation of foreign goods.

There is no longer a tobacco monopoly in the country.

In Maracaibo, there are over 200 people employed in this industry. Only one factory uses machinery, that of German del Gallego. Wages are paid per day, at the rate of 60 cents for every 4,000 cigarettes. Many are made by girls, who work at home.

Molds and tools are imported from the United States, with the exception of a few wooden machines used for rolling, that can be made more cheaply here.

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## PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.<sup>1</sup>

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—COMMERCIAL RELATIONS, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—CONSULAR REPORTS, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—ADVANCE SHEETS, CONSULAR REPORTS, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—EXPORTS DECLARED FOR THE UNITED STATES, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—SPECIAL CONSULAR REPORTS, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880-81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885-86 (a portion of this work was published as CONSULAR REPORTS No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1888; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications except Tariffs of Central America, etc., are exhausted, and the Department is therefore unable to supply copies.

In 1890 the Department decided to publish reports on special subjects in separate form, to be entitled SPECIAL CONSULAR REPORTS. There are now the following SPECIAL CONSULAR REPORTS:

Vol. 1 (1890).—Cotton Textiles in Foreign Countries, Flies in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

Vol. 2 (1890 and 1891).—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alpes Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

Vol. 3 (1891).—Streets and Highways in Foreign Countries. (New edition, 1897.)

Vol. 4 (1891).—Port Regulations in Foreign Countries.

Vol. 5 (1891).—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

Vol. 6 (1891 and 1892).—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries, and India Rubber.

Vol. 7 (1892).—The Slave Trade in Foreign Countries and Tariffs of Foreign Countries.

Vol. 8 (1892).—Fire and Building Regulations in Foreign Countries.

Vol. 9 (1892 and 1893).—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

Vol. 10 (1894).—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

Vol. 11 (1894).—American Lumber in Foreign Markets. (New edition, 1897.)

Vol. 12 (1895).—Highways of Commerce. (New edition, 1899.)

Vol. 13 (1896 and 1897).—Money and Prices in Foreign Countries.

Vol. 14 (1898).—The Drug Trade in Foreign Countries.

Vol. 15 (1898).—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

Vol. 16 (1899).—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia, Africa, Australasia, and Polynesia.

Vol. 17 (1899).—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

Vol. 18 (1900).—Merchant Marine of Foreign Countries.

Vol. 19 (1900).—Paper in Foreign Countries; Uses of Wood Pulp.

Vol. 20 (1900).—Part I. Book Cloth in Foreign Countries; Market for Ready-made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe.

Of these SPECIAL CONSULAR REPORTS, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Disposal of Sewage and Garbage, Foreign Trade in Coal Tar, Flies in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, India Rubber, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Soap Trade, etc., Sericulture, Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published, in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars of foreign countries, proclamations by the President, and orders of the War and Navy Departments.

Of the monthly CONSULAR REPORTS, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicant without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving CONSULAR REPORTS regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

<sup>1</sup> Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State July 1, 1897.

SPECIAL CONSULAR REPORTS.

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SCHOOL GARDENS IN EUROPE.

VOL. XX—PART II.

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REPORTS FROM CONSULS OF THE UNITED STATES IN ANSWER  
TO INSTRUCTIONS FROM THE DEPARTMENT OF STATE.

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*Anna*  
Issued from the Bureau of Foreign Commerce,  
Department of State.

*Dec. 7, 1900*



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## DEPARTMENT INSTRUCTION.

DEPARTMENT OF STATE,  
*Washington, June 8, 1899.*

*To certain consular officers of the United States.*

GENTLEMEN: You will please prepare a report upon the founding, progress, and practical working of school gardens in your respective districts. Sketches and photographs of subjects appropriate for pictorial illustration covering classes actually engaged in collecting or transplanting specimens; groups of children at garden, dairy, or kitchen work; schoolroom experiments in plant growth, etc., will add materially to the value of your replies.

The reports will be published in the consular reports.

I am, gentlemen, your obedient servant,

THOS. W. CRIDLER,  
*Third Assistant Secretary.*



# SCHOOL GARDENS IN EUROPE.

## BELGIUM.

### GHENT.

I will endeavor to give verbatim, as near as can be translated from the French and Flemish languages into the English, the detailed programmes of the different courses and classes as provided for the several schools in East and West Flanders.

(1) *Les écoles primaires or écoles communales* (primary schools or city schools).—Free schools to which children are admitted after 6 years of age. The sexes have separate schools, located in different localities. This is the case with all classes of educational institutions.

(2) *Les écoles moyennes de l'État pour garçons* (middle State schools for boys).—Primary schools sustained by the Government, to which scholars pay a small quarterly fee. Boys are admitted after 6 years of age. These schools are established in all of the cities throughout the Kingdom; none in country districts. In a very few cities there are schools of this class for girls, but none in this consular district.

N. B.—The first-named schools are attended by children of the poorer classes, while the children of the better classes attend the latter.

(3) *Les écoles ménagères* (housekeeping schools).—Free for girls over 14 years of age; established by and under the direction of the Government.

(4) *Tijdelijke melkerijscholen* (temporary dairy schools).—Free for girls over 15 years of age; established by and under the direction of the Government.

This class of school is taken from one locality to another throughout the province, the course being given for a period of three months at each place.

### ÉCOLES PRIMAIRES (PRIMARY SCHOOLS).

The Government, by its minister of the interior and public instruction, prepares and issues the programme of studies in this class of schools throughout the Kingdom of Belgium. In connection with this programme there is a provision of law, viz, "The school regulations and the courses which are hereunto annexed should be submitted to

the communal council, to be accepted as a whole or arranged according to the circumstances and requirements of the school district." Thus, in this consular district, which comprises East and West Flanders, with its diverse industries, both as to manufacturing and agriculture, there are but few school districts in which the same lines of studies are adopted, but whatever the course it must be selected from and in accord with the aforesaid programme.

All country district schools have a plat of ground of not less than 1 acre annexed, which is used for experimental cultivation, and it is only in these schools that a full course in theoretical and practical agriculture is taught. In the schools of this city no part of the course in agriculture is given, but instead, natural science.

In the schools for girls of this city, the housework and kitchen-work course is taught only to the scholars of the highest grade, as under the regulations the scholars of the class receiving this course of instruction must have attained the age of 14 years. The regulations also provide that there shall be devoted during the course of the week one hour to theoretical and five hours to practical study. The scholars are divided into four groups, and perform successively the different exercises. In the country schools for girls, as a rule, the course for the different grades in house and kitchen work is adopted. Needlework and hygiene courses are quite generally adopted in both city and country schools.

The programmes comprise substantially the following:

#### INSTRUCTION IN AGRICULTURE—SCHOOL FOR BOYS.

##### FIRST GRADE.

###### *I. The school garden.*

Demonstration of the growth of the principal vegetables, also of some garden flowers, fruit trees, weeds, etc.; instruction in weeding, transplanting, watering.

###### *II. Subjects for instruction.*

A. Gardeners' tools: The spade, the hoe, the rake, the trowel, the cord, the weed hook, and the watering pot.

B. Plants: The cabbage and the magnolia; the beans and the peas; the apple and the pear tree; the cherry and the plum tree; the rose tree and the strawberry plant; the carrot and parsley (difference between parsley and fool's parsley); the potato and the tobacco; the onion and the leak.

C. Animals: The caterpillar and the butterfly; the trichina and the May bug; the bat; the mole and the hedgehog; the swallow; the titmouse and the sparrow; the lark and the finch; protection of the insect-eating animals.

##### MIDDLE GRADE.

###### *I. The garden.*

A. Preparatory lessons: (1) Showing the germination of beans and grains. (2) Studying the principal organs of the plant; root, trunk, leaf, flower, fruit; simple

explanation of the functions of these organs. (3) The trunks of fruit trees; interior construction, branches, fruit skin.

B. First lessons in arboriculture: (1) Plant slips; how to plant flowers in pots in the school and at home. (2) Twigs. (3) Laying out a small nursery; selection of kernels and stones; preparation of the ground; fertilizers; sowing; care to be taken during growth; manner of grafting. (4) Manner of transplanting a young tree. (5) Showing the scholars how to trim the pear tree in summer and in winter. (6) Familiarizing the scholars with the insects which are dangerous to fruit trees; remedies for their destruction; caterpillar destruction; smoking; protection of insect-eating animals, etc.

C. First lessons on culture of vegetables: (1) Showing the scholars the labor required for a certain number of vegetables during the different periods of their development. Simple and clear explanation as to the best methods of cultivating the soil. The children to be permitted to work as much as possible in the ground and to cultivate vegetables. (2) Showing the plants when in seed; the care of and how to gather and keep the seed. (3) How to recognize the poisonous plants, which grow chiefly in the district and neighborhood of the school.

## II. *The animals.*

A. Preparatory lessons: (1) The principal parts of the skeleton of a house animal, a bird, a reptile, and a fish. (2) Simple explanation of the digestion, the blood circulation, and the respiration of mammiferous animals.

B. Special lessons on some house animals: (1) The cow and the sheep; the horse and the hog; principal peculiarities of their constitution and their mode of living; care. (2) The hen; principal characteristics of interior construction; qualities of a good layer; care; productions.

C. Small insect-eating animals: Familiarizing the scholars with (a) the principal insect-eating birds of the country; (b) the lizard and the grass snake or hazel worm; (c) the toad and the frog; (d) the golden maybug, the green grasshopper, the spider. Protection which they should have.

## III. *Reading with explanation.*

Dictation; problems brought in connection with the lessons of the regular course.

### HIGHER GRADE.

#### *I. First lessons in experimental natural science necessary to understand the lessons in agriculture.*

(1) Several ordinary qualities of bodies; divisibility, penetrability, compressibility, and elasticity. (2) The bottle water level. (3) The atmosphere, composition and principal qualities; compressing the air; the barometer; the sucking pump; drafts. (4) Water; its composition; the part it takes in the growth of the plant. (5) Observation and explanation of some natural phenomena due to capillarity. (6) Warmth; influence on plants and on the health of animals; expansion; thermometer. (7) Meteorological phenomena from an agricultural point of view; mist, rain, clouds, dew, frost, snow, hail. (8) Light; its effects on the growth of plants.

#### *II. Elements of agriculture.*

(1) The cultivable soil; the under soil. (2) Principal kinds of soils; chief qualities. (3) Effects of drainage. (4) Plowing; conditions and effect of good plowing. Harrowing and rolling. (5) The fertilizer; its part. The manure; its importance, how to employ it; use of the eel; very simple explanations as to the most useful fertil-

izers. (6) The sowing; choice of seed; sowing with the free hand; sowing in rows; sowing with tools. (7) Care of plants during their growth; weeding, thinning, hoeing up, hilling; effect of such operations. (8) Harvesting of the principal productions of the soil; hay, grain, carrots, and turnips; their preservation.

### *III. Special explanations on some domestic animals.*

(1) Review of the lessons as taught in the middle grade on this subject. (2) Characteristics of a good work horse and a good milch cow. (3) Practical instructions on the food and health of the domestic animals.

### *IV. Elements of arboriculture and agriculture.*

(1) Review of the principal lessons taught in the middle grade. (2) Functions of the roots, the stem and the leaves, the sap, and its part. (3) Practical study of the principal methods of grafting. (4) Formation of the head of the plant, the pedicel, the pyramid, the crown of the trees. (5) Pruning the pear tree in the garden of the school. (6) Selection of trees for the orchard; care. (7) Plucking and conserving the fruit. (8) Culture of vegetables; division of the garden; order of succession of the plants between planting; practical instructions on the culture and conservation of vegetables, such as carrots, beans, cabbages, potatoes.

V. Reading lessons with explanation; dictation, problems brought in connection with the lessons of the regular course.

## COURSE NOT OBLIGATORY.

### *I. First elements of natural science.*

(For the schools in which agriculture is not taught.)

#### FIRST GRADE.

Simple conversations on the following subjects: (1) Principal external parts of the human body. (2) Principal animals, as known by the child. (3) Principal organs of the plant. Principal trees and plants of the garden; some poisonous plants. (4) Some of the best-known minerals of the country. The most used metals.

N. B.—Collections to be made.

#### MIDDLE GRADE.

(1) The human being: Short description of the skeleton and first understanding of the principal functions of life, organs of the senses. (2) The animals; describing by one or two principal characteristics the chief divisions of the animal kingdom as represented in some well-known types. Short and selected descriptions of well-known animals; division of the vertebra. (3) The plants: Studies of some well-selected types: First, the principal organs of the plant; second, about twelve of the most important plant families, particularly the most useful and the most dangerous plants of the country; gather and press herbs. (4) The minerals: Practical instruction as to the most useful minerals of the country and the metals in greatest use. (5) Instruction in the industries of the country and its productions.

#### HIGHER GRADE.

(1) The human being; review of the preceding course; more detailed instructions on the most important functions of life. (2) The animals: Review of the preceding course; short study and description of about twelve animals; types selected from the principal orders of mammiferous animals and birds; useful and dangerous animals.

(3) The plants: Review of the studies of the middle grade on the principal plants; study of some new plants selected from such as family types; useful and dangerous plants; reading lessons on herbs. (4) First instruction in natural science: Some ordinary properties of bodies—divisibility, penetrability, compressibility, elasticity, gravitation, weight, center of gravity; crowbar, pulley, windlass; first instructions on the even weight of liquids—bottle water level, fountain; compression of air—barometer, suction pump; the noise, the echo; first instructions on warmth—expansion, thermometer, evaporation; principal meteorological phenomena—clouds, rain, frost, snow, hail, dew, etc.; first instructions on light—sun spectrum, rainbow colors; loadstone, magnetic needle, compass; instructions on static electricity; phenomenon of thunder and lightning; lightning conductor. (5) Instructions on the industries of the country.

## ELEMENTS OF HOUSEWORK AND KITCHEN WORK, SCHOOL FOR GIRLS.

### FIRST GRADE.

Simple conversations on the following subjects: (1) Clothing of the girl, order, and care. (2) Some furniture of the kitchen, the dining room, the sleeping room, care. (3) Some prepared dishes, how to serve. (4) Coal and kindling wood, care to be taken when fire burns. (5) The candle and the petroleum lamp; how to avoid danger. (6) Some creeping plants for decorating the house, their use.

### MIDDLE GRADE.

Practical conversations on the following subjects: (1) Washing of linen and clothing. (2) Cleaning of dishes and furniture; sweeping of the kitchen and rooms of the house; dusting. (3) Qualities and preservation of meat, fish, eggs, milk, butter, bread; cleaning, washing, and cooking of vegetables. (4) Manner of making fire; care to be used in making fire. (5) Cleaning and use of the petroleum lamp. (6) Weeding and watering of garden plants; preservation of fruit; making of bouquets. (7) Manner of setting table, table service; serving and clearing of table.

### HIGHER GRADE.

Practical conversations, sometimes accompanied or followed by reading lessons on the following subjects: (1) Washing and ironing of small linen; removal of spots and stains and keeping the clothing in repair. (2) Cleaning and keeping in repair the kitchen utensils and the principal furniture of the house; cleaning of the kitchen and rooms. (3) Selection and preservation of the principal eatables—such as milk, coffee, beer. (4) Use of ordinary inflammable material; lighting the fire; keeping the stove in repair. (5) Selection, preparation, and use of the petroleum lamp. (6) Weeding, thinning, transplanting, turning over the soil second time, hilling and sprinkling the vegetables; care of decorative plants. (7) Table serving. (8) Care of chickens and the hen roost.

Everywhere that circumstances will permit, the girls are to be taught the care of children and sick persons. The girls have to bring with them the linen which is to be washed and ironed, but the city council or the board of school directors pay the expenses in connection with the instruction in cooking. Great importance is to be attached to economy. It is necessary to teach the future housekeeper how cheap but nourishing foods can be prepared.

## NEEDLEWORK, SCHOOL FOR GIRLS.

### FIRST GRADE.

(1) The knitting of a pair of stockings. (2) Round knitting; cuffs. (3) Socks, relative proportion.

## MIDDLE GRADE.

Review of the preceding course: (1) The knitting of stockings; study of the proportion of the different parts; how to measure a commenced stocking; how to strengthen the heel. (2) Study of designed stitch on bolting cloth; a, b, c, and figure. (3) Elements of the seam. (4) Simple sewing; handkerchiefs, towels, table linen, shirts, aprons.

## HIGHER GRADE.

Review of the preceding course: (1) Knitting of sleeping clothes, mittens. (2) Designing on linen; a, b, c, and figures. (3) Stitches, flounces, buttonholes, eyes, lace holes. (4) Mending, darning, preparation of linen and clothing. (5) Cutting and making simple clothing.

Art work is taught as the scholars become competent.

## ELEMENTS OF HYGIENE.

## FIRST GRADE.

Simple conversations on the following subjects: Cleanliness in the habitation, airing of living rooms; danger in drinking river or rain water; drinking when overheated; precaution against extreme heat and severe cold; cleanliness of clothing and school commodities; care to be taken of the eye and the ear; some rules pertaining to the use of eatables and drinks; cleanliness of the skin, the mouth, the hair; precautions to be taken at play and recreation; first care in case of wounds caused by burns.

## MIDDLE GRADE.

Danger of dampness in the habitation; necessity of thorough airing in the different parts of the habitation; danger of drafts; filtering water; some precautions in relation to the heating of rooms; selection of clothing according to the changes of the atmosphere; selection and use of a good lamp; necessity of a sufficient quantity of food; regularity in meals; use of beer and coffee; adulteration of milk and butter; danger of strong drinks; washing and bathing; beneficial influence of moderate labor; conditions of good sleep; first care in case of wounds caused by burns and cuts; loss of blood; asphyxiation; indigestion; precautions against measles, the small-pox, and scarlet fever.

## HIGHER GRADE.

(1) The habitation; ground; building material; ordinary arrangements. (2) The atmosphere; impure air; compressed air. (3) Drinkable water; infected water; boiling and filtering; use and misuse of water. (4) Combustibles and heating apparatus. (5) Natural and artificial light. (6) Principal rules of good nourishment; use made of drinks; degeneration and adulteration of foods and drinks; alcoholism. (7) The care pertaining to the head, the mouth, the hair, etc.; baths. (8) Exercise; work; play; gymnastics; rest. (9) First care in case of wounds, choking, loss of blood, poisoning. (10) Contagious diseases; circumspection; disinfection.

## ÉCOLES MOYENNES DE L'ÉTAT (MIDDLE SCHOOLS OF THE STATE).

The programme of the courses for this class of schools is prepared under the direction of the minister of the interior and public instruction, and the law relating to the Écoles Primaires applies also to this class.

In the schools of this city the course on agriculture is not given, but in its stead the courses on natural science and hygiene, which are similar to those provided for the "Écoles Primaires." In the small cities of agricultural districts, the course is given as provided for by programme. As heretofore mentioned, this class of schools is created for cities only. There are no schools of this class for girls in this consular district.

## FIRST YEAR.

A. Agriculture: (1) Soil and undersoil. Formation of the earth. Experiments showing properties, fertility, cohesion, capillarity, etc. Loosening of soil; its advantageous effects; different kinds of ground; clayey, sandy, calciferous; vegetable mold. Analysis of the soil, separation of the clay; separation of the vegetable mold; search of the soil for acidity. Experiments to show with what power the ground absorbs water and fertilizing materials. A word on meteorological influences. (2) Mechanical working of the soil. Instruments of the hand—spade, hoe, etc. Digging. Instruments worked by horses; plowing, single and double. Description of a good plow. (3) Plowing. Plowing flat land; land in benches and ridges; deep plowing; precaution which it requires. Plowing on surface or plowing up the stubble; special instruments. Completing operations of plowing; harrowing and rolling, their special function. (4) Grain. Qualities of good seeds. Germinating power; usual method of verifying. Precaution to be taken in the purchase of seeds. Dressing seed wheat with lime. Selection of grains. (5) The sowing period. Sowing with the hand; sowing with machine; advantage of this last method. Quantity of seeds, depth to be sown. (6) Method of care; second tillage; weeding; hilling. (7) Harvesting and haymaking. Favorable period. Instruments. Conservation of the agricultural products; stacks, barns, corn pits.

B. Care of the domestic animals: (1) Lodgment; hygienic conditions; causes of the changes of air; ventilation of the stables, the chicken coops, the pigpens, the dairies, etc.; temperature most convenient to those localities; degree of humidity of the air; hydrometer. (2) Care of keeping; function and structure of the skin of the animal; beneficial influence of a convenient litter, of frequent baths, of a daily grooming. (3) Poisoning by venomous plants; flatulence; inoculation and prevention of maladies; summary precautions against epizooty; services of the veterinarian.

C. Injurious insects: Principal insects injurious to plants; caterpillar, may bug.

D. Cryptogamic maladies: Proper process of destroying; the rot of the grain; the oidium and the mildew of the vine.

## SECOND YEAR.

A. Agriculture: (1) The fertilizers; laws of restitution; necessity of fertilizers. (a) Animal fertilizers—farm dung, composition, fermentation; care in keeping; cisterns of liquid manure; necessity of a supply in case of insufficiency of farm dung; liquid fertilizers; human fertilizers; bone, animal black, wool waste; blood; guano. (b) Vegetable fertilizers—green fertilizers, turf; oil cakes. (c) Mineral fertilizers—lime; calcareous clay, refuse of sugarhouses, calcareous compositions for meadows; plaster. (d) Chemical fertilizers; phosphate fertilizers; potassium fertilizers; compound fertilizers; mode of purchase of these substances; agricultural stations and laboratories; simple experiments in order to recognize the principal adulterations of fertilizers; reasonable mode of employment. (e) Preparation of fertilizers for plants according to analysis of the soil; field experiments. (2) Drainage. Effects; practical work. (3) Irrigation. Suitable waters; favorable time; effects on the herbage. (4) Natural and artificial prairies; management; care taken; clover and

principal plants for grazing. (5) Special cultures; principal cereals; potatoes; one or two industrial plants of the region. (6) Rotation of crops; principal rules; special application to the region.

B. Care of domestic animals: (1) Alimentation, description; function of the digestive organs of the different domestic animals; list of the principal substances contained in the foods; mineral matter, hydrates of carbon, azotic matters, fat matters; ration for keeping, ration for production, ration for work; great importance of regularity of rations, alimentation of the milch cow, of the horse, etc. (2) Drinking; effects of warm and cold drinks on the animal; character of the drinkable water; how to improve impure water, aeration, ebullition, filtration; elementary methods of purifying; temperature of water suitable for animals. (3) The cow and the dairy; qualities of a good milch cow; composition of milk; circumstances which modify its richness; skimming; butter; cheese and whey. (4) The chicken; indication of some races particularly commendable; characteristics of a good layer; care relative to incubation and of the brood. (5) Care to be given other animals of the farmyard.

#### CULTURE OF FRUIT TREES AND KITCHEN GARDENS.

##### FIRST YEAR.

(1) Multiplication of fruit trees; nurseries; establishment, keeping, cutting slips, propagation of shoots, grafting. (2) Transplantation season; choice of varieties; choice of subjects; extraction, pruning, hole for plant, putting in place; ulterior cures. (3) Pruning of the fruit trees; object and advantages; operations of pruning during the winter; operations of pruning during the summer. Practical instruction in the garden: (4) Culture and pruning of pear and apple trees. (5) Culture and pruning of the peach tree. (6) Culture and pruning of the vine. (7) Creation and keeping of the orchard. (8) Insects and maladies which attack fruit trees; caterpillars. (9) Picking and conservation of fruit.

##### SECOND YEAR.

A. Practical work of the garden: Grafting, pruning, in winter and summer.

B. Vegetable culture: (1) Creation of the kitchen garden; exposition; distribution, succession of cultures. (2) Tilling and fertilizers. (3) Methods of multiplication of culture and of conservation of the most useful vegetables.

#### TEMPORARY DAIRY SCHOOLS FOR GIRLS.

The programme below will fully explain the workings of this school. Dairy work is not taught in any of the State or communal schools of this consular district. It is, however, taught in the parochial schools, under the supervision of the different orders of sisterhood.

The installation of a temporary dairy school of three months is made generally at the request of the agricultural committee, and it is subsidized by the State, by the province, by the commune, and by the agricultural committee of the locality.

Attendance is gratuitous; the scholars have simply to purchase the school supplies. Girls in order to be admitted to the school must be 15 years of age, must possess a good primary education, and must bind themselves in writing to attend the courses regularly and to do

all the work required to be done in a dairy (churning, skimming, cleaning, etc.).

If more than sixteen girls apply to take the courses, there will be held on the day of the opening of the school a competitive examination, and the sixteen girls having attained the highest number of points will be accepted.

The teaching personnel consists of: First. One director, whose duties are to give instructions on agriculture and zoology. He has charge of the arrangements of the school (selection of rooms, purchase of milk, productions, etc.), directs the practical work, examines regularly the tools and machinery; has also the financial direction. Second. Two dairy teachers, who remain constantly in the school. Their duties are to give the lessons in dairying and bookkeeping; they direct the practical work of the scholars.

The programme of instruction contains the following branches:

#### THEORETICAL COURSE IN DAIRY AND CHEESE MAKING.

First. Description and composition of the milk, putrefaction, adulteration, description of the instruments which determine the value of the milk and the discovery of the adulteration, heat meter, cream meter, milk density meter, butter meter, centrifugal examination instruments, acid meter, sifting, airing, sterilization, cooling, weighing, and measuring. Second. Installation of a dairy, rooms, water, etc. Third. Sale and transportation of milk. Fourth. Butter making, qualities of milk to use, skimming, different systems and explanation of each system, the cream, churning, preservation, packing, shipments, use of leavings, skimmed milk, buttermilk, whey. Fifth. Cheese making, milk to use, cheese rennet, theoretical problems in cheese making, different kind of cheese, foreign cheese. Sixth. Advantages of cooperative dairies.

#### LESSON IN ZOOLOGY.

General information; organs of digestion, blood circulation, and separation of the milk.

The milk cow; qualities of a good milk cow; different breeds; selection; regular food; care to be taken of the animals; handling of the milk; calving; hygiene; accidents; remedies within reach of the farmer.

#### LESSON IN MEADOW CULTURE.

Knowledge of the ground and of the climate; examination of the meadow or prairie; flora; care; fertilizers; watering, and draining. Food plants; regular production; selection; preservation. Construction of fruit gardens; fruit trees; hedges.

#### PRACTICAL COURSE.

The practical course is given as follows: One hundred and fifty to 200 quarts of milk are worked daily, part in butter, part in cheese. All the scholars take part in the work alternately, and are divided into four groups—the first for skimming, the second for churning, the third for cheese making, and the fourth for cleaning the machinery and rooms.

The milk used is furnished by a farmer in the neighborhood of the school, or by the parents of the scholars. The handling of milk is done in cooperation. Each of the furnishers of milk accepts the productions in return.

This system is adopted to show in a practical manner the advantages of cooperation.

## DIPLOMAS.

A jury composed of a delegate of the department of agriculture of the province, one of the committee, the director of the school, and the teachers of the dairy, hold a general examination and deliver a diploma of capacity to all scholars having obtained half of the points as given for the different branches. The examination is given on the theoretical and practical courses. A certain number of points are given to each scholar, according to the ability shown in the daily practical work.

N. B.—The farmers of the locality where the courses are given are invited twice a week to visit the dairy and witness the handling of the machinery, and to examine the advantages of the new systems.

RICHARD LE BERT, *Consul*.

GHENT, *July 26, 1899.*

## ANTWERP.

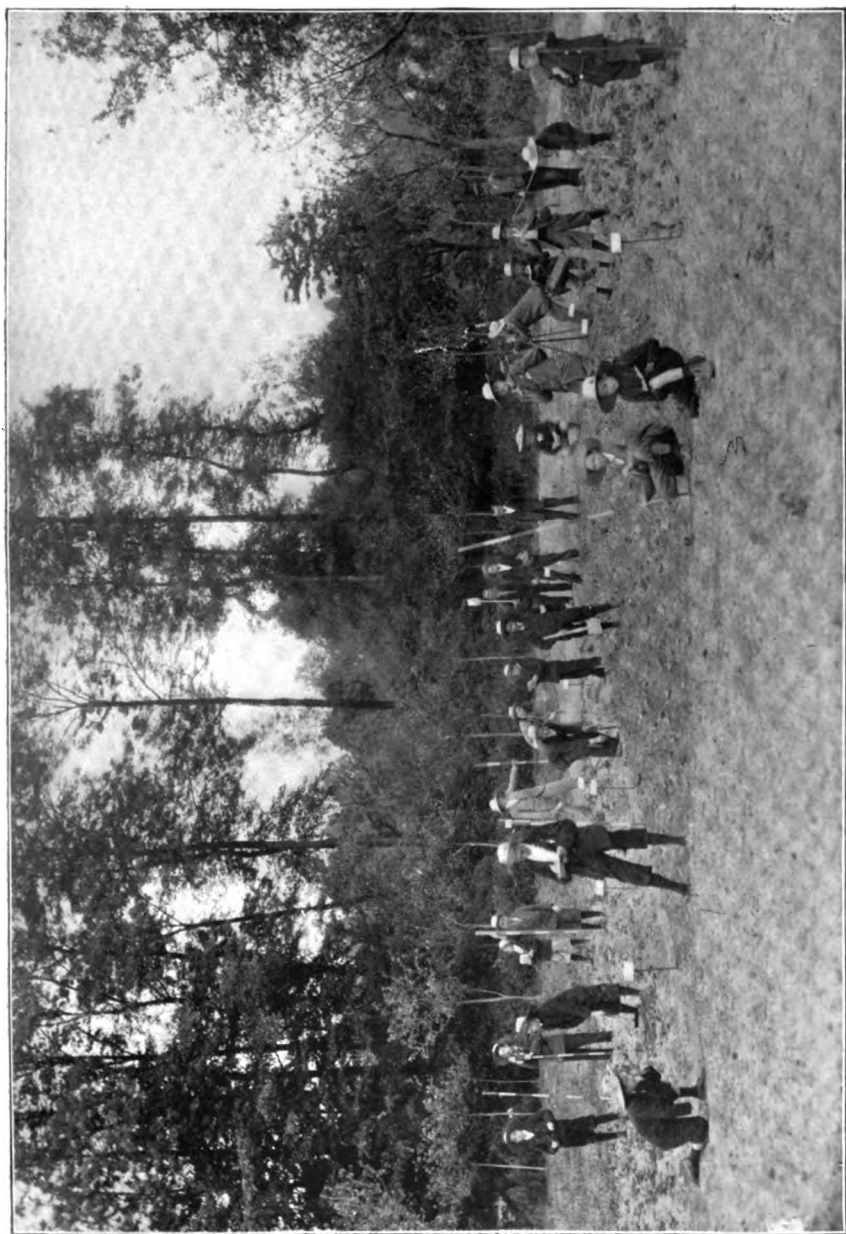
The term school garden or “Jardins d’Enfants” is employed in this country to designate the department of public schools in which children from the age of 3 to 6 years are cared for intellectually, morally, and physically, and given instruction under the so-called “Froebel” system. Schools for the sole purpose of instruction in garden, dairy, or kitchen work do not exist in this consular district, as far as it has been possible for me to ascertain, and it is consequently impossible to comply with that portion of the circular requesting photographs covering classes engaged in collecting and transplanting, in schoolroom experiments in plant growth, etc.

The establishment of the school gardens as they exist in Antwerp to-day is due to the efforts made about the year 1840 by a certain ladies’ charitable association, which established what are now known in many parts of our country as day nurseries. The first institution of this sort was opened on the 17th day of June, 1840, and proved so successful that in the year 1841 a second one was established. In 1845 a citizen of this city, who wished to remain incognito, entered into an obligation to pay annually the sum of about \$200 to the association of ladies above referred to, provided that they established a third school. The condition named was immediately accepted, and in 1847 the third school was opened. A little later a fourth was added to the existing number.

These nurseries or schools were under the management of fourteen mistresses and four assistants, all of whom were obliged to be in attendance upon their duties throughout the entire day. During the winter season the children were confined eight hours in the schools and during the summer season twelve hours—that is to say, from 7 o’clock in the morning until 7 o’clock in the evening.

The municipality contributed to the organization of these schools, aided in their furnishing, and paid also the rent of the premises occupied.

These institutions were established for the purpose of education, the



STUDYING ARBORICULTURE AND AGRICULTURE AT GRAUMONT (EAST FLANDERS).



moral and physical development of children, but from their commencement the association undertook to partially feed them as well. To meet the expense of so doing, a small daily contribution was made by the parents of those provided for. Each day, soup made at the headquarters of the charitable association was served to the children.

These useful institutions rendered great services to the poorer classes of the population. They alleviated to a considerable extent their household cares and were the means of ridding the mothers of very considerable anxiety and trouble.

The lady patronesses and mistresses displayed an equal amount of zeal and devotion to their duties, but these virtues alone did not suffice to educate to the best advantage children from 3 to 6 years of age. This fact was first brought to the attention of the public in 1874 by Mr. E. Allewaert, the alderman charged with the duties of public instruction. His idea was that the existing nurseries or "guardian" schools, as then termed, should accomplish something else than simply care for the children during the day. It was necessary, in his opinion, that a well-developed method for the intellectual, moral, and physical development of the children should be introduced. It was necessary to teach them while playing and to cause them to play while learning. His views were speedily adopted. Mr. Allewaert shortly after undertook a voyage to Germany, France, and Holland for the purpose of visiting institutions where the education of the youngest children was given attention. He examined thoroughly the plans in vogue and returned to Antwerp with a plan fully developed.

The task of opening schools was not one of great difficulty. The problem to solve was to find persons competent to carry out the scheme of instruction proposed. Alderman Allewaert preferred to delay the inauguration of his scheme rather than to hurry the matter and run the risk of not meeting with success. His first endeavor was to educate competent teachers for the task proposed. In 1876, three public school-teachers were sent at the expense of the city to the Froebel school in Leyden, Holland, for the purpose of acquiring the system there in vogue. The following year three other graduates of the normal school were also sent there. These ladies finished their studies in 1879 and the establishment of the "Jardins d'Enfants" was immediately commenced.

In 1880 one "Jardin d'Enfants" was opened in the Rue de l'Industrie, a second in the Rempart du Kipdorp, at Kiel, in the unoccupied part of the building of the school for young girls. Nor did the city neglect the establishment of courses of instruction for teachers in the Froebel method.

These schools were so well received by the public that in the following year it was necessary to establish three new ones, and to-day there is one connected with each public city school.

The schoolrooms are selected with a view to obtaining the best hygienic conditions, and are admirably adapted for instruction according to the system adopted. The education of the young scholars is acquired in the most rational manner and the one best fitted to their tender years. Their physical development is a matter to which the greatest attention is devoted. Substantial food is distributed to them each day, and there is constant medical supervision of their well-being. Every week, a medical authority visits each school and examines the state of health of all the pupils.

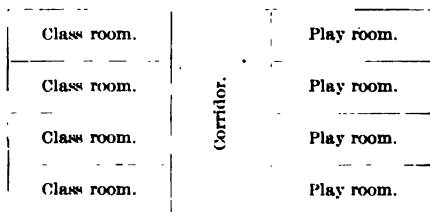
As can be imagined, the Froebel schools have attained great success in this city, and this result is due largely to the forethought bestowed on their organization as well as to the efforts of the teachers and assistants attached to them.

Following are the regulations pertaining to their management:

Children are admitted from the age of 3 to 6 years, and are confined at the school from 9 o'clock in the morning until 4 o'clock in the afternoon, with the exception of Thursday, when they leave at noon. At midday, the children are furnished three times a week with good bouillon, once a week with vegetable soup, once a week with milk soup. To supplement the foregoing, each child brings with it whatever in the way of a cold lunch its parents see fit to provide, which they are allowed to consume at the time the above-mentioned nourishment is served.

A physician nominated by the city authorities is obliged to visit, at least one day in the week, each of the schools referred to. Every school is in the charge of a "directrice." Every class is provided with a teacher and one assistant, and contains from 20 to 40 children. In the kitchens, two servants are charged with maintaining the cleanliness of the apartments occupied. In each school there is a garden, in which the classes pass a certain time each day, and are allowed to plant flowers, vegetables, etc., under the supervision of the teachers.

The instruction furnished follows the system of Froebel, with slight modifications. After a half hour spent in the class rooms, the children pass to the play room. Here, according to circumstances, they are allowed either to amuse themselves as they see fit, or instruction is given in certain exercises, some of them accompanied by music and singing. Following will be found a plan of the schools as they are organized here in this city:



As will be seen, the method of arrangement is entirely practical. Outside each class room, and divided from it by a center passageway, is a play room. After half an hour passed in the class room the pupils pass to the corresponding play room.

A fact which would impress itself most strongly upon a casual visitor would be the extreme degree of patience and care exerted by the teachers in their efforts to develop the intelligence of the young pupils. The extreme cleanliness of the class rooms, as well as the tidiness of the children, can not fail to produce a powerful impression upon anyone visiting these establishments. With every move to develop the pupils intellectually there is combined a means of developing them physically. The system is probably so well known that it is unnecessary for me to enter into details.

The teachers of these establishments are recruited from the best scholars of the public common schools, taken at an age between 14 and 16 years and admitted to the normal schools for a course of two years' study. The salaries paid by the city to the assistants vary from 500 to 900 francs (\$96.50 to \$173.70) per year; to the teachers, from 1,000 to 1,950 francs (\$193 to \$376.25). The "directrice," or mistress, of each establishment is paid from 2,000 to 2,500 francs (\$386 to \$482.50) annually. Lodging, heat, and light are furnished free of cost.

GEO. F. LINCOLN,  
*Consul-General.*

ANTWERP, *July 28, 1899.*

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## BRUSSELS.

After exhaustive inquiry as to the existence of school gardens in this consular district, I learn that there are no schools of this character here, nor is this branch of instruction given in any public or industrial school. There are, however, three institutions in this consular district corresponding in character to agricultural colleges in the United States, namely, the Government horticultural school at Vilvorde, horticultural school at Mons, and the horticultural and arboricultural school at Tournai, Belgium. The two last named are communal institutions, but receive an annual subsidy from the Government. Scholars under 16 years of age are not admitted to the above-mentioned schools.

GEO. W. ROOSEVELT,  
*Consul.*

BRUSSELS, *August 19, 1899.*

## LIEGE.

In 1888, two schools were founded by societies, one for agriculture and the other for horticulture. In 1890 these two schools united, forming what is known as the horticultural school of Liege, and receiving financial support from the Government, the province, the city, and public subscription. I am not able to learn exactly what the different corporations pay in this case, but it is usual for them to share the expense equally. The city contributes as a special inducement 500 francs, or \$96.50, a year, to be distributed among the most deserving pupils, according to merit. In case the pupil completes the course, he generally receives a reward in money to enable him to visit similar schools elsewhere.

It is a three-years' course, and in order to be admitted the pupil must be at least 16 years of age, pass an examination in the elementary branches, or furnish a certificate from an accredited school that he is familiar with those branches.

The instruction is mostly practical. The pupils are employed about the garden in the morning from 8 to 10 o'clock, and in the afternoon from 1.30 to 5 o'clock. From 10 to 12 in the morning, theoretical instruction is given in the classroom.

Only boys are admitted into this school, and the general average in attendance is about 35.

There are similar schools at Vilvarde, Ghent, Tournay, Mons, and Carlsbourg, all in Belgium.

ALFRED A. WINSLOW, *Consul*.

LIEGE, *November 4, 1899.*

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## FRANCE.

### HAVRE.

With its mild and temperate climate, constantly charged with the moisture brought by the warm winds of the Atlantic, and its fertile soil, France is a country gifted by nature for agricultural pursuits. Nearly one-half of its population is engaged in cultivating the ground, or 17,435,888 inhabitants out of 38,517,975.

Although in some localities the ground is tilled to-day as it has been for centuries past, yet owing to the strides which agricultural education has made in France, the majority of the farmers appreciate the benefits which may be derived from the aid of modern science. Up to twenty years ago, technical teaching of agriculture can not be said to have obtained a permanent foothold in France. During the last few years, however, it has been greatly developed, so that at the present time the

importance which it has attained and the great services it is rendering to the agricultural classes of France are sure guaranties that hereafter, agricultural schools will be among the permanent institutions of the country. In 1761 and 1765, during the reign of Louis XVI, Bourgelat founded the veterinary schools of Lyons and Alfort. Lavoisier, a little later, founded on one of his farms the first agronomical station.

The Parliament during the revolution seriously studied the questions of different forms of education and of establishing courses of agricultural instruction. Talleyrand, Béthune, Charost, Thitandeu, the Abbé Grégoire, and others, submitted carefully prepared projects, but these, as well as that of François de Neufchâteau, disappeared in the troublous times. The hour was little propitious for the development of the peaceful arts.

The Restoration did nothing for agricultural teaching.

The Government of Louis Philippe had excellent intentions, but there were no results.

In the interval, by their personal efforts alone, without Government support, certain public-spirited citizens, by establishing model farms or agricultural schools, laid the foundation of agricultural teaching in France.

In 1822, Matthew de Dombasle founded the Institute of Roville, near Nancy; in 1826 Bella, that of Grignon, near Versailles, to-day still in existence and one of the most flourishing institutions in France; in 1830 Ruffel, the school farm of Grand-Jonau, near Nantes; in 1832 Bodin, that of Trois Croix, near Rennes, and in 1842 Nivière, the school of Saulsaie, in the Department of Ain. Other farm schools and model farms were also organized.

The Republic of 1848 continued the work, and by a law passed October 3 of that year incorporated the teaching of agriculture into the educational system of France.

This law provided for three grades of agricultural schools, as follows: The National Agronomical Institute, richly installed at Versailles; the local schools (*écoles regionales*), and, lastly, school farms. The institutions at Grignon, Grand-Jonau, and the Saulsaie were the first local schools, to which was added that of Saint Angeau in the Cantal.

The school farms increased rapidly. In 1852 there were 70, and the number allowed by the law, one for each department, was soon reached. Owing to the demand for a higher education than can be obtained at these schools, they are gradually being replaced by those of the upper grade.

The development of the science of agriculture was greatly retarded by the Government which followed. In 1852, the National Agronomical Institute was entirely suppressed. The local schools continued to exist, but two of them were in a state of decay in 1870, that of Grignon alone surviving. The school farms were not prosperous and were reduced

to about 50. There were at this time a dozen chairs of agriculture, four chairs of agricultural chemistry, and six agricultural stations.

After the Franco-Prussian war, the third republic reorganized the entire system of agricultural education. On December 16, 1873, upon the proposition of Joigneaux, the National Assembly founded the National School of Horticulture at Versailles, in the Potager du Roi. Two years after, a law was enacted which enlarged the extent of agricultural teaching by the institution of practical schools, in which simple methods of tilling the soil were taught. On August 9, 1876, another law reestablished the National Agricultural Institute and installed it in the Conservatory of Arts and Trades of Paris. The higher courses in agriculture were also restored. On June 16, 1879, a law was passed extending the courses in agriculture to the departments and communes, by the creation of departmental chairs of agriculture, the incumbents of which were expected to give nomadic lectures on agricultural topics to the public-school pupils, so that as soon as possible they in turn could teach the proper methods of cultivating the soil.

This law, modified by that of March 28, 1882, rendered agricultural teaching obligatory, under certain conditions, in the primary schools.

In 1888, a special practical dairy school was founded at Mamirolle, in the Department of Doubs, which has since been made a national dairy school.

In 1890, in consequence of the appropriations which were voted by Parliament, the National Agronomical Institute was removed from Versailles and installed in Paris, and a National School of Agriculture was established at Douai.

The department of agriculture of the French Government, appreciating the many benefits of a modern system of agricultural education to the farmers and to agricultural industries in general, is engaged not only in perfecting the institutions already established, but also in increasing their number.

The courses in the national schools have been made more scientific; the agricultural stations have been considerably developed; experimental farms were created, and these have in a short time become veritable institutions; special chairs of agriculture have been established, by which agricultural courses are given in the universities, lyceums, colleges, upper primary schools, and in the communes. Chairs of arboriculture, of agricultural chemistry, etc., have been added to a certain number of the universities.

In 1898, there were in France the following establishments, chairs, etc., for the teaching of agriculture and all that pertains to it:

1 national agronomical institute at Paris, with 24 professors, 6 lecturers, 4 head masters, and 18 teachers.

3 national veterinary schools, with 24 professors and 18 teachers and head masters.

1 national forestry school at Nancy.

3 national agricultural schools at Grignon, Rennes, and Montpellier, with 26 professors, 29 lecturers and teachers, and 6 military instructors.

1 national dairy school at Mamirolle (Doubs), with 4 professors, 1 lecturer, and 2 head masters.

1 national school of agricultural industries at Douai (Nord), with 8 professors, 4 teachers, and 1 head mechanic.

1 national school of horticulture at Versailles, with 12 professors, 6 head masters, and 2 military instructors.

34 practical schools of agriculture.

2 practical schools of irrigation and drainage.

4 schools of viticulture.

4 dairy schools.

2 dairy schools for girls.

1 practical school of horticulture.

1 agricultural orphan asylum.

14 farm schools.

2 sheep-raising schools.

1 silkworm-culture school.

3 schools for teaching cheese making.

2 primary agricultural schools.

2 schools for teaching the milk and butter industries.

9 fruit-growing schools.

5 chairs of agricultural chemistry in the faculty of science.

90 departmental chairs of agriculture organized by the Government.

172 professors of agriculture in the primary and secondary schools.

Courses of agriculture, arboriculture, etc., are given in the lyceums, colleges, and upper primary schools, and agricultural teaching is compulsory in the lower primary schools.

There were also:

42 agronomical stations and laboratories.

2 zoological stations.

3 silkworm raising stations.

2 entomological stations.

1 station for the inspection and study of seeds.

1 for vegetable physiology.

1 for vegetable pathology.

1 for animal physiology and the feeding of cattle.

1 for the trial of agricultural machines.

2 laboratories for the study of fermentation.

3 for testing wines.

1 laboratory for viticulture.

- 1 agricultural station.
- 1 for the milk industry.
- 1 for the study of destructive insects.
- 1 for horticultural researches.

Finally, there were experimental farms in all the departments.

The progress which agricultural education has made in France in sixty years is shown by the fact that the credits voted by the Government for this purpose in 1835 were \$53,315, while in 1893 they had increased to \$838,104.

It would be impossible in the compass of a consular report to give a description of all the institutions in France devoted to the study of agricultural subjects, but a brief account of several of the most important may be sufficient.

#### NATIONAL AGRONOMICAL INSTITUTE.

The National Agronomical Institute at Versailles, which was suppressed in 1852, was reestablished by the law of August 9, 1876. It is the most important agricultural institution in France, and is organized exclusively for the teaching of modern sciences as applied to the uses of agriculture. It is now located in Paris, No. 16 Rue Claude Bernard, in buildings admirably adapted for its purposes, which were formerly occupied by the College of Pharmacy. It has twenty-two chairs, including those of zoology, applied to agriculture; mineralogy and geology, rural economy, physics, meteorology and microbiology, colonial cultures, comparative agriculture, botany, agricultural technology, etc.; six lecturers on the subjects of political economy, hygiene, arboriculture, horticulture, etc.; four head masters, eighteen teachers, and the officers of the administration. Its aims are to form:

1. Farmers and proprietors possessing the necessary scientific knowledge for the best cultivation of the soil;
2. Special professors for teaching agricultural subjects in the national schools, the practical agricultural schools, in the departments, in the normal schools, etc.;
3. Men who have been well instructed and capable of performing various public and private duties in which the interests of agriculture are concerned;
4. Agents for carrying out the requirements of the forestry laws;
5. Agents for the administration of breeding stables;
6. Agents for taking charge of agronomical stations;
7. Chemists for agricultural industries (sugar refineries, distilleries, manufactures of fertilizers, etc.); and
8. Agricultural engineers (drainage, irrigation, construction of machinery).

The institute is organized for teaching the theories of the different branches, and depends upon the pupils getting their practical education

during the three months' vacation and after graduation, by arrangements made by the officials of the institute with some of the principal farmers in France and other countries. The scholars are advised that after graduation from the institute, they have yet much to learn in the application of the technical knowledge which they have acquired; that they must listen to the advice of practical farmers, and work a long time under their direction before starting in life as scientific farmers, or entering the professions connected with the agricultural industries.

The courses consist of lectures and practical demonstrations of chemistry, of agriculture, physiology, zoology, mineralogy, rural engineering, silviculture, arboriculture, and viticulture.

Several times a week, there are lessons given in topographical drawing, rural architecture, and agricultural machinery construction and designing. Every Thursday, the students go on agricultural, industrial, botanical, and geological excursions, visiting farms, cattle markets, factories, etc.

The students have access to the scientific collections of the institute and other educational institutions of Paris.

A library containing all the important works on agriculture and allied industries, published in France and other countries, is open to the pupils at certain hours.

The studies cease during the first half of the month of July.

The directors of the institute have made arrangements by which pupils, whose parents are not farmers, can pass at least two months of the vacations on farms.

When the pupils return from their vacations they are expected to present a journal in which is described the work they have performed. This journal is examined by the professors, and marks given. The length of the course is two years, after which time, if the pupil has obtained the requisite average of marks and is deemed worthy by the academic board, he receives a diploma of "Agronomical engineer."

The diploma of agronomical engineer entitles the holder to enter the open competition for positions as attachés to embassies, consular pupils, and similar offices in the diplomatic and consular corps.

The diploma is given to the pupil by the minister of agriculture.

The work and progress is determined:

1. By frequent recitation and by marking the practical work and exercises of the pupils.

2. By general examinations held at the end of each term. The marks obtained serve to establish the rank of the pupils in their classes and to aid in making the lists of those entitled to receive the diploma upon graduation.

Those pupils who do not receive the diploma, yet have shown during the course aptitude and application, may receive a certificate of studies from the minister of agriculture. Every year, the two scholars highest

on the list of graduates are entitled to a complimentary course of studies for three years, either in France or in foreign countries, at the expense of the Government. Those graduates who receive diplomas and are considered worthy can take an extra course of one year in the laboratories of the Ecole d'Application of the institute, with an allowance of 100 francs (\$19.30) per month from the Government.

The graduates who intend to become practical farmers or to be employed in the manufactories of agricultural implements can spend the extra year either on a farm or in an agricultural factory.

There are no arrangements in the institute for boarding the scholars, but there are certain "pensions" approved of by the directors, where scholars may live under the surveillance of the officers of the school. The students enter school at 8 o'clock in the morning and leave at half past 4. With the exception of an hour and three-quarters interruption for the midday meal, taken outside the grounds, all the time is taken up either in the class rooms, laboratories, etc., or on the experimental farm at Joinville-le-Pont, in study, recitations, or practical work.

At the end of each week, a bulletin showing the weekly standing of the pupils is sent to the parents.

Admission to the institute can be gained only by competitive examination. The applicant must be at least 17 years of age. The cost of tuition is fixed at 500 francs (\$96.50) per year, payable semiannually; besides, a deposit of 80 francs (\$15.40) must be made at the commencement of each year for defraying the expenses of excursions, replacing objects destroyed, etc.

The board of examiners is appointed by the minister of agriculture and presided over by the rector of the institute.

The examinations are both oral and written. The latter may be taken in different cities of France, designated by the authorities, but the oral examination must be at Paris, before the regular board of examiners. The written examination consists of mathematics, comprising arithmetic, algebra, geometry, mechanics, logarithmic calculations, and trigonometry, for which the highest coefficient is 3; French composition, also 3; natural sciences, with coefficient of 3; physics and chemistry, coefficient 3, and descriptive geometry 2; total coefficients, 14. The oral examination, in addition to the above, includes geography and either German or English. If desired, the applicant may be questioned on his knowledge of agriculture, for which he may receive an additional coefficient, but it is not obligatory.

To meet the wants of poor but promising pupils, there are open to competition each year six prizes or bourses of 1,000 francs (\$193) each; four of 500 francs (\$96.50) each, the recipients of which are entitled to be relieved from the payment of the tuition fee, and ten prizes consisting of free tuition only. Foreigners may be admitted to

the institute under the same conditions as French scholars, by furnishing a certificate from their diplomatic representatives. French graduates from the institute who have received diplomas are entitled to have their active military service reduced to one year. They are also qualified to enter the School of Forestry without undergoing any further examinations.

The results of the course of education as given in the National Agronomical Institute have been most satisfactory. Those of the graduates who have taken up practical farming have kept themselves at the head of the profession in their districts, and have inaugurated up-to-date methods of culture, which have been adopted by the other farmers.

Many are engaged in teaching the scientific principles of agriculture which they acquired at their alma mater. Those who are stationed in the more remote districts may be said to have accomplished small revolutions in the old methods of farming. Some are employed as directors and chemists in the agronomical laboratories. Others are connected with agricultural industrial establishments, especially the sugar refiners, where they not only render important services to the during the manufacture of sugar, but teach the best methods of cultivating the beets and of analyzing the earth to determine what the soil requires, and of inspecting fertilizers before purchase.

#### NATIONAL SCHOOLS OF AGRICULTURE.

The national schools of agriculture are component parts of the Governmental system of agricultural education, and are conducted under the supervision of the minister of agriculture. They are to fit young men for engaging in agricultural pursuits or for agricultural teaching. They are located at Grignon, in the Department of the Seine et Oise; at Montpellier, Department of Herault, and at Rennes, Department of Ile et Vilaine.

The schools at Grignon and Montpellier receive full boarders, half boarders, and day scholars, while that at Rennes receives only day scholars. The prices of tuition are as follows: At Grignon, for full boarders, \$231.60 per year; at the other two schools, \$193 per year; half boarders, \$115.80 per year at all the schools, and day scholars \$77.20 per year.

Candidates for admission are required to pass examinations in the construction and use of the French language, in elementary mathematics, physics, chemistry, and natural sciences. They must be at least 17 years of age. Foreigners can only be admitted as day scholars when there is not a sufficient number of native scholars to avail themselves of the school accommodations for boarders and half boarders. The system of examination for candidates in use in the National Agronomical Institute is also carried out in the national schools. At the end of their course, students who pass successful examinations receive

the "Diploma of the National Schools of Agriculture" at the hands of the minister of agriculture. This diploma assures to the holders a number of marks in the competition for admission to the National Institute, and also, under certain conditions, reduces the term of military service to one year.

#### SCHOOL AT GRIGNON.

The most important of the national schools of agriculture is located at Grignon, a small village, 11½ miles from Versailles, in the Department of Seine et Oise. It was founded in 1826 by August Bella, and, with the exception of that of Matthew de Bombasle at Roville, was the first establishment for teaching agriculture created in France. It has well-constructed buildings, equipped with modern appliances. Theoretical instruction is given by means of recitations and lectures. The course consists of agriculture, botany, general and agricultural chemistry, economics, rural legislation, rural engineering, construction and repair of agricultural machinery, physics, meteorology, agricultural technology, sylviculture, viticulture, and pomology.

Lectures are delivered by specially selected experts in geology, mineralogy, horticulture, and entomology. The students are also given instruction in military tactics.

Practical knowledge is acquired on the lands connected with the school. There are 321 acres devoted to the culture of the different cereals and other farm products; 370 acres in wood land, besides kitchen, botanical, and other gardens specially adapted to the study of certain branches. The proper care and treatment of animals are part of the education received at the school. For these purposes, there are herds of fine Normandy and other meat cattle, flocks of Dishley, Southdown, and Dishley-merino sheep, pigs of the Yorkshire and Berkshire breed, and the best varieties of poultry. There are also stables for horses and cattle, piggeries, sheepfolds, and poultry houses and yards, where the students receive practical instruction.

Experiments are made with different fertilizers to determine the proper kinds to be used under certain conditions; with various seeds for planting, especially wheat; with sugar beets, with the many varieties of potatoes, etc. The students from time to time are taken to the neighboring farms and on excursions to the farming districts of adjoining departments.

For the course in botany, the laboratory of the school is well fitted, At the agronomic station frequent comparative analyses are made of the soil, of the crops obtained, and of the fertilizers used. The experiment field connected with the station contains 5½ acres.

Complete account is kept of the results of the production of the fields, the cost of labor, fertilizers, etc., for the instruction of the students.

For the study of farm engineering there is a building made specially for the purpose, containing 1,100 square meters of surface. On the first floor are displayed some 200 farming implements used in the cultivation of the ground, in gathering the crops, etc. In the galleries there are about 100 machines, employed in the dairy and other agricultural industries.

Besides the buildings devoted to the regular courses of study, there are attached to the institute as annexes various establishments for making researches and experiments. These are the Ferme de la Faisanderie at Joinville-le-Pont, in the neighborhood of Paris, an experimental station for determining the best kinds of seeds to be sown, when to sow them, and when to harvest; another for experimenting with different kinds of agricultural machinery; a laboratory for the special study of fermentation as applied to the brewing, distilling, wine, cheese, and butter making industries; and a laboratory of vegetable pathology, where the various diseases to which growing plants are liable are treated. The machines are taken apart and reassembled by the students, and their uses and modes of repair explained by expert machinists.

There is also a designing room, in which the professor in charge of the farm engineering department instructs the pupils in the proper construction of machines, by means of drawings and models.

The course of farm engineering further comprises land surveying, leveling, study of rural construction, drainage, irrigation, etc.

The courses of geology and mineralogy, as directly applied to agriculture, are under the charge of a professor specially chosen for the purpose.

In the course of physics, much attention is paid to the study of the application of modern science to agriculture, especially in relation to electricity, etc.

In meteorology, the students are taught the different natural phenomena, their varieties, their consequences, forecasting, and explanation.

In the 370 acres of woodland, the students are well grounded in the practice and theory of sylviculture, viticulture, and pomology. They are taught methods of keeping forest and other trees, of renewing their growth, and the best conditions of cultivating them.

The different courses are coordinate, following a rational progression, preparing the way one for the other. Practical application of the theoretical knowledge gained is obtained in the laboratory (the professor at the head of each department having his own), in the workings in the fields and woods, in the experiment stations, in the stables, etc.

The scholars, every two weeks, must make written reports of the

progress they have made. There are at present 204 scholars attached to the school.

In 1893, of the 807 graduates who had received diplomas since the founding of the school, 462 became proprietors of farms, 111 became agricultural professors, and 234 went into other professions or were lost sight of.

The Grignon school received a gold medal at the Universal Exposition of 1889, for the excellence of its methods.

#### PRACTICAL SCHOOLS OF AGRICULTURE.

The practical schools of agriculture, as their name indicates, are essentially schools devoted to the profession of agriculture. They are intended for young men who have been well prepared in the public and other schools, who desire to acquire a more extended theoretical and practical knowledge of agriculture. In the national schools, predominance is given to theoretical teaching, in the farm schools more attention is paid to practical education, while in the practical schools of agriculture the courses are divided equally between the two kinds of instruction. The practical schools are not, as the national schools, the property of the Government. They may belong to private individuals or to a department, but the State supplies the agricultural instructors. The proprietor of the school, whether a farmer, a commune, or a department, furnishes the grounds, materials, and buildings, while the Government defrays all educational expenses. In exceptional cases, if a department has but few resources, the Government may even share the expense of the buildings, etc. In general, when a proprietor offers his farm for agricultural school purposes, the department erects the buildings and purchases the necessary material; or the proprietor may advance the money and is repaid by the department in yearly installments.

The agriculturist, who furnishes the necessary guarantees and whose farm is accepted by the administration for the establishment of a practical school, is named director of the school. Besides the prices of tuition and amount derived from the work of the students, he receives a salary from the Government.

In case a department is the proprietor of the school, it has the choice of the director, but the latter must be approved by the minister of agriculture. In all cases, the schools are under the supervision and control of the department of agricultural teaching of the ministry of agriculture. The instruction in the practical schools differs according to the wants of the localities where they are established. In some, viticulture is given the preference; in others, the dairy industries, irrigation, etc. The extent of land connected with the schools also varies according to the districts, their proximity to cities, the particular industries of the country, etc. Some schools have from 500 to 800

acres, others from 7 to 25 acres only; the average area of the schools now in operation is about 215 acres.

As mentioned before, there are in France to-day 34 practical schools of agriculture, 2 practical schools of irrigation and drainage, 4 of viticulture, 1 of horticulture, 4 dairy schools, and 2 dairy schools for girls.

The personnel varies in the different schools, but generally consists of: A director, who is generally a professor; a professor of agriculture; a professor of sciences, physics, and chemistry; a professor, who may be a superintendent, charged with teaching natural sciences; a head master in charge of the elementary studies; a veterinary in charge of the teaching of the care and maintenance of animals; a practical agriculturist; a practical horticulturist, and a military instructor. The professors of these schools are obtained from the National Agronomical Institute and the national agricultural schools. The head teachers must have received the "brevet superieur."

The majority of students in the practical schools belong to farmers' families. Before entering the schools, the candidate must pass an examination in the construction and use of the French language and in the history and geography of France. The scholars are generally received as boarders, but in schools located near towns, half boarders and day scholars are also admitted.

The price of tuition varies from 400 francs (\$77.20) to 600 francs (\$115.80) per year for boarders; from 200 francs (\$38.60) to 250 francs (\$48.25) for half boarders, and 50 francs (\$9.65) for day scholars. The course of studies lasts three years, but the tendency is to reduce the time to two years.

The programme of studies varies, but it comprises as a foundation the following subjects, which are more or less developed according to the particular wants of the region where the school is established: Moral instruction, French language, arithmetic, geometry, preparation of building plans, land surveying, levelling, agricultural geography, physics and meteorology, chemistry applied to agriculture, agricultural technology, natural sciences (zoology, entomology, botany, diseases of plants, geology), general and specific agriculture, rural engineering, rural economy, and rural legislation, animal hygiene, horticulture and arboriculture, agricultural accounts, and military drills.

The pupils are examined weekly, and there are general examinations at the end of each course.

Upon the final graduation, those pupils who are judged worthy receive a "certificate of instruction" delivered in the name of the minister of agriculture, which entitles the holder to a certain number of points in the competition for admission to the national schools of agriculture and reduces by one year the time of active military service.

The results obtained from the practical schools have been very satis-

factory, and are encouraging for the future. Being the "school of the peasant" they are of great service to the agricultural industry of France. Their merit is universally recognized. Not a year passes but foreign governments send delegates to study the organization and methods of teaching employed in the schools, and in Switzerland, Italy, Belgium, Portugal, England, etc., similar schools have been founded.

Since the practical schools of agriculture are established on the same bases, an account of a few of the principal institutes will give a more or less correct idea of them all.

The Practical School of Agriculture and Horticulture of Antibes, although not one of the largest in France, is well fitted for the purposes for which it was created. It was founded in 1891, and is beautifully located in the outskirts of Antibes, a city of 7,000 inhabitants, on the shore of the Mediterranean equidistant from Cannes and Nice, in the Department of Alpes-Maritimes. The property is rented by the department. The cultivation of oranges, orange and other flowers, olives; and grapes being a large source of revenue to the agricultural population of the district, special attention is given to the study of horticulture, viticulture, etc., although practical farming is not neglected. The school has some 25 acres of land, which may be considered as one vast garden. The course of studies lasts two years. The accompanying photographs show the students at work.

The Practical School of Agriculture and Irrigation of Avignon is situated 1 mile from the city of Avignon, in the Department of Vaucluse. It was inaugurated in 1886, and is the property of the department. It was established for the purpose of giving technical instruction to the sons of farmers and other young men who intend adopting farming as a profession.

It possesses large and well-adapted school buildings and 55 acres of land, divided into kitchen and botanical gardens, nurseries, fields for the cultivation of grain, etc., well-watered pasturages and vineyards. There are also stables for horses, cows, and sheep, a dairy, and barns and other houses well supplied with farming utensils. The photograph will give an idea of one branch of the work done by the students.

The Practical Dairy School of Coetlogon is established in the chateau of this name, situated near the city of Rennes, in the Department of Ile-et-Vilaine. It was created in 1886, upon the request of the Chamber of Commerce of Rennes. It derives its support from the credits allowed by the minister of agriculture, and is assisted by the Department of Ile-et-Vilaine and by the city of Rennes. It receives young girls of 14 years and over who desire to learn modern practical methods of handling milk, of making butter and cheese, of taking care of milch cows, and of kitchen gardening.

Besides dairy work, the young students can also complete their general education. They are employed in turn in keeping farm accounts,



SPRAYING GRAPEVINES AT ANTIBES.



CLEANING HORSES AT ANTIBES.





PREPARING MILLET FOR BROOMS AT AVIGNON.



in kitchen and laundry work, and in sewing, repairing, and making clothes.

The school receives its pupils generally from the large Brittany families, frequently sisters from the same family succeeding each other. There are also students from Switzerland and Belgium, who come to learn the processes of making the French cheeses.

At this school, the principal kinds of French cheeses are made. The Port Salut and Camembert of Coetlogon can rival those of Mayenne and Normandy.

The course of studies lasts for one year, from October to October. The teaching is both theoretical and practical. Upon graduation, pupils found worthy receive the "certificate of instruction."

#### FARM SCHOOLS.

Farm schools form another group in the system of agricultural education in France. In the law by which they were created in 1848, they are defined as "farms conducted with skill and profit on which apprentices, chosen from the working classes and admitted free of expense, shall do all the work, receiving at the same time remuneration for their services and an agricultural education essentially practical." The aims of the school are to make skillful farm hands, overseers, etc., and to give professional instruction sufficient for the sons of farmers "who have not the ambition to work for the diplomas of the higher schools."

The farm schools have rendered great services in former years in teaching the working classes improved methods of cultivating the ground, but the demand for a higher and more scientific education than is taught in these schools is gradually decreasing their number. In 1870, there were 52 farm schools in France, while to-day there are only 14. Well adapted from their origin to the wants of the country, the instruction they give has become insufficient. Those which are now in existence have been obliged to raise the standard of their teaching, but at the same time, as is demanded by their nature, most attention is given to practical work.

Farm schools are generally conducted by private individuals, approved by the Government, the latter furnishing the staff of instructors. The director receives the benefits of the labor of the apprentices, but can not charge any price for tuition, as in the practical schools of agriculture. The Government pays the director a salary, and in addition allows him a fixed sum of 270 francs (\$52.11) for each apprentice.

The apprentice is obliged to pass an examination in elementary studies. He must be at least 16 years of age, and live at the school. The course of studies lasts from two to three years. It consists of a review of the elementary branches, the correct use of the French language, arithmetic, geometry, and the metric system of cubage, surveying,

leveling, agriculture in the most general acceptation, horticulture, arboriculture, care of animals, agricultural accounts, and military drills. Practical instruction in agriculture absorbs about two-thirds of the time, the rest being given to theory.

Upon graduation, if found worthy, the student receives a "certificate of instruction," to which is attached a special prize of 300 francs (\$57.90).

The certificate of instruction also entitles the holder to a certain number of marks in the competition for admission into the national schools of agriculture.

#### GENERAL.

Besides the groups of schools already described, there are other agricultural establishments in France, such as apprentice schools for shepherds, silkworm raisers, and cheese makers. There are also free schools where agricultural subjects are taught under the direction of various religious orders, as the Christian Brothers, Brothers of the Holy Ghost, Trappists, etc. There is scarcely a department of France in which one of these schools does not exist. They are all subject to the inspection of the minister of agriculture.

Most of the historical information in this report was obtained from the interesting report of Mr. Tesserand, presented to the International Agricultural Congress of 1889. I am also indebted to Mr. Grosjean, the inspector-general of agricultural teaching in the department of agriculture, who some years ago was commissioned by his Government to study American agricultural methods, and to various directors of agricultural schools, who have in every case responded most cordially to my requests for information.

A. M. THACKARA, *Consul.*

HAVRE, *November 10, 1899.*

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#### BORDEAUX.

I have made searching inquiries, both among officials and individuals, and am unable to learn of the existence of any school gardens in this consular district. Until within a year or two, students were permitted to work in the botanical garden and greenhouses attached to the Jardin des Plantes, which is just opposite this consulate, on certain days of the week. These were rarely young students, but practical horticulturalists, foremen, etc, in nurseries and vineyards, who took this opportunity to extend their botanical knowledge and learn new processes of care and cultivation. I have never seen children or young students, such as is evidently contemplated by the circular, at work there. Even this work has now been discontinued, and no provision is made for such opportunities.

In most of the high schools for boys, there are botanical lessons, which the professors illustrate with specimens procured by themselves or supplied by the pupils. Horticulture is largely taught as a business to apprentices, or volunteers as they are called, in nurseries and vineyards, but I can find no trace of any such thing as a "school garden" or of "schoolroom experiments in plant growth." Neither can I find any case in which children are taught "dairy or kitchen work in schools." The young girls are taught needlework in most, perhaps all, of the schools provided for them, but I know of no other work of this sort which is taught in educational institutions.

ALBION W. TOURGEE, *Consul.*

BORDEAUX, *July 3, 1899.*

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### NICE.

No school gardens, such as would appear to be indicated by the circular, exist in the Department of the Alpes Maritimes. There is, however, an institution under the administration of the ministry of agriculture, at Antibes, known as the Practical School of Agriculture and Horticulture. This school was created in 1891. The course of study is of two years' duration and prepares for admission to the national schools of agriculture or horticulture, in case students should desire to continue their studies. The school receives students paying full board and lodging, those taking board only, and those simply attending daily. The prices are 500 francs (\$96.50) for the first category, 250 francs (\$48.25) for the second, and 50 francs (\$9.65) for the third, per annum. These sums are payable as follows: Three-tenths upon entering, three-tenths on January 1, and four-tenths on April 1. These prices include all necessities, and medical attendance and medicines. The buildings are situated about 2 kilometers (1.242 miles) from the town of Antibes, and have attached an experimental garden where all manner of floral products are represented, hothouses at high and medium temperatures, a vegetable garden, a fruit orchard, a botanical garden, a vineyard, land for plowing, land submitted to irrigation, a cow house, a dairy, piggens, stables, a complete series of the most approved agricultural instruments, and, finally, a large quantity of land for experimenting with crops on a more extended scale. The teachers are paid by the General Government.

The theoretical courses consist of: (1) Course in agriculture—general agriculture, culture of products peculiar to this department, horticulture, tree culture, and rural economy and legislation. (2) Course in physical sciences, including technology, the various applications of agriculture, special study of the manufacture of olive oil, of wine, of essences and perfumes, of the preparation of dried fruits, meteorology,

and analyses of the different soils. (3) Course in natural sciences; zoology, botany, geology, and mineralogy as applied to agriculture; useful and destructive insects; apiculture and the diseases of plants. (4) French language and mathematics. (5) Hygiene of domestic animals. (6) Military exercises.

Intending students must be between the ages of 14 and 18 and must present (a) demand of their parents upon stamped paper, (b) birth certificate, (c) certificate of vaccination, and (d) certificate of good conduct from the last school attended or from the mayor of the last domicile of the applicant. They must also, before being admitted, pass an examination in French, arithmetic, history, and geography. A certain number of free scholarships are offered by the Government to those who are unable to pay the prices above mentioned, upon recommendation of the advisory board of the school.

OTTILIO PIATTI, *Vice-Consul*.

NICE, *September 4, 1899.*

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## ROUBAIX.

I have investigated the subject of school gardens, and find that none exist in this consular district.

The gardener who has charge of the public parks in Lille is required to give one hour three times a week to all who may apply for horticultural instruction. On Sunday morning he may be consulted at the Palais Rameau, Lille, concerning arboriculture.

This is the nearest approach to the instruction in regard to which information is desired.

W. P. ATWELL,  
*Commercial Agent.*

ROUBAIX, *August 3, 1899.*

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## GERMANY.

### BERLIN.

The school garden as an educational institution is by no means the embodiment of a new idea. More than two hundred years ago Locke wrote on that subject, and during the latter part of the last century the proposal to establish school gardens in which the science of agriculture might be taught in connection with primary schools was regarded with such favor that it is probable that the plan would have been adopted throughout Germany, had the wars with the French Republic and Empire not checked educational progress and diverted German thought and revenues into other channels.

The first German school garden was founded in 1881, through the initiative of the local authorities at Gerderath, in Prussia. It was organized on a very moderate scale, the entire cost of the original installation being only \$100. Teachers' conferences have since been held yearly at this institution, and considering the limited size and facilities of the school, it has exerted an important influence in popularizing the movement in this country. Similar school gardens have been established at Gerderhahn, Birgeln, and Ratheim, as well as a few other places, but on the whole, the movement to extend this branch of education can not be said to have attained an importance at all proportionate to the high and rapid growth of German education in other branches of study.

Such impulse as the movement has felt has been due mainly to the success of similar schools in other countries, notably in Austria and Sweden. In 1876, there existed in Sweden 1,602 school gardens, and the number increased to 1,980 in 1881, so that the rudiments of agriculture form an essential feature of primary education in that country, and nearly all public schools have gardens connected with their courses of instruction.

Although the number of school gardens in Austria is far less than in Sweden, the subject has received in that country much more practical attention than in Germany, and in 1896, a newspaper was established at Vienna for the purpose of advocating the general adoption of garden schools throughout the Austrian Empire. In France and Switzerland, a successful beginning has also been made in the same direction.

In Germany, as above indicated, the school-garden system is still in its incipient stage, and the results achieved have been too recent and upon too small a scale to form the basis of any general or trustworthy conclusions as to the practical value of this form of education. At the school in Gerderath, the pupils receive instruction in planting, grafting, pruning, and the general care of trees and shrubs, the preparation of soils, and the growing of farm products. Each pupil has a bed or plot of ground, for the care and condition of which he is held responsible, and special attention is given to the application in the culture of this land of the principles that have been learned in the school. In laying out the beds, the pupil's knowledge of geometry and measurements is brought into exercise; he is taught to measure the height of a tree by the length of its shadow, and various other simple problems which show the relation of mathematical or scientific facts to the daily work of a farmer.

At some of the gymnasiums in Berlin, efforts have been made to encourage an interest in botany and horticulture by cultivating plants and shrubs illustrating the different and most valuable species, in the grounds which are attached to the school buildings. The plants used

for this purpose have been for the most part contributed by the botanical gardens, but the object principally aimed at and accomplished has been to facilitate the study of botany rather than to awaken an interest in agriculture. Whether the school garden is to be definitely adopted as a feature in the general system of education in Germany, is a question for the future. Its slow growth hitherto has been largely due to the fact that during the past thirty years, Germany has been changing from an agricultural to an industrial nation, and this has involved courses of study so extended and so elaborate that the pupils in all grades of schools below the university are now worked to the full limit of their endurance, and there is a general and well-founded unwillingness to increase the number and range of their studies.

In all matters of education, public opinion in Germany is governed largely by the initiative and influence of the Government; and until the ministry of education shall take an active and persistent interest in the extension and development of school gardens, it is not likely that they will attain in this country anything approaching the importance that they have reached in Sweden. Agriculture is at best a precarious pursuit in Germany, where land is costly, exhausted by centuries of cultivation, and dependent for productiveness upon expensive and constant manuring. Seasons are uncertain, and every agricultural product except fresh vegetables is exposed to the competition of products imported from countries where the conditions of growth are more favorable than here. For these reasons, the educational energy of this country has been turned into the branches of study that will give the people higher efficiency in manufacture and commerce, with what conspicuous results the present splendid industrial prosperity of the German people abundantly testifies.

There is a strong and general feeling that in some way German agriculture must be revived and sustained; and if the school garden proves to be an effective implement for this purpose, it will be extended and developed to meet the requirements of the situation, but thus far Germany is a follower, and not a leader, in this branch of education. There are enthusiasts on the subject here, as elsewhere, and among the various treatises which have appeared in recent years, the following may be cited as embodying the most advanced and intelligent ideas on the school garden as a department of popular educational science: "Der Schulgarten des In und Auslandes," by Cronberger, published by Blazek, Frankfort, 1898; "Der Schulgarten," by Dr. Erasmus Schwab, published by E. Holzels, Vienna, 1876; "Der Schul- und Hausgarten," a monthly publication, printed at Allenburg, Germany.

FRANK H. MASON,  
*Consul-General.*

Berlin, July 20, 1899.

**BARMEN.**

According to the best information obtainable, there are no school gardens in this consular district. There are agricultural schools in Germany, such as the *Landwirtschaftliche Schule* in Cleve and the *Pomologische Anstalt* in Geisenheim, but none are located in this district.

Here in Barmen, as well as in a few other cities of this district, there are evening cooking schools for young girls. These are free of charge and are not compulsory; each term is for six months, and single lessons are given twice a week, from 6.30 to 9.30 p. m. The average age of scholars is 20 years, and applicants under 16 years of age are not admitted. The dishes prepared are distributed free of charge among the scholars.

MAX BOUCHSEIN, *Consul.*

BARMEN, *August 10, 1899.*

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**BRESLAU.**

The Botanical School Garden was founded by the city administration in 1889, covering at that time a surface of 5,560 acres. By the necessary enlargement which was made last year, it now embraces a ground of 11,738 acres. Three-quarters of the whole ground are destined for the planting of flowers, which are needed in the different schools. Among these are 154 species of plants used for general botany, and 314 species not so often needed. The plants wanted for instruction at schools are sent on the order of the teacher. The other quarter of the ground is used for transplanting specimens, to show their development after they have matured. Teachers can take their classes to see the plants growing. This method of teaching, which has been lately introduced, has made a great impression on the scholars and has shown favorable results.

The scholars do not work in the garden, but they receive plants to take home. If a scholar evidences great interest, he receives a larger number of plants.

The city government is about to buy an additional plot of land, where the scholars, accompanied by their teachers, can take up the practical work of botany.

C. W. ERDMAN, *Consul.*

BRESLAU, *July 11, 1899.*

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**COLOGNE.**

After due inquiry, I am unable to discover any school gardens in this district. The nearest approach to such an institution is a university of

agriculture for land and forest instruction, and a plat of ground is under cultivation in Cologne where specimens of flowers and plants are grown for the especial use of the city schools, and where the school children are taken for the study of botanical specimens; but in no case are the children employed in transplanting or cultivation.

JOHN A. BARNES, *Consul*.

COLOGNE, *November 4, 1899.*

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### DRESDEN.

The first practical efforts to establish school gardens in connection with the public schools of Saxony were made in 1869, and since that time the plan has been prosecuted with satisfactory results. The largest and best equipped is located at Plauen, a suburb of Dresden, was founded in 1882, is in charge of President Oscar Wilsdorf, aided by an efficient corps of teachers selected from graduates of the agricultural school, and is considered a model institution. The grounds contain 3 acres, on which are erected main school building for boys, main school building for girls, gymnasium, carpenter and workshop for boys, and building in which girls are instructed in cooking.

A portion of the grounds is used for the cultivation of fruit and forest trees, where the boys are instructed to plant, prune, and care for all description of trees raised in this Kingdom.

The vegetable garden is tended by girls who are taught how to prepare the ground for planting, to plant, hoe, weed, and generally cultivate all kinds of vegetables common in Saxony.

A portion of the grounds is devoted to the raising of flowers, particularly roses, violets, pansies, etc., in which both boys and girls are instructed, and on account of the love for flowers universal among the Germans this is considered a most elevating feature of the school. There is also a portion of the space used in raising such botanical plants as are discussed in lessons on natural history. In addition, the garden contains specimens of all rock formations found in Saxony, and a geological section of the crust of the earth.

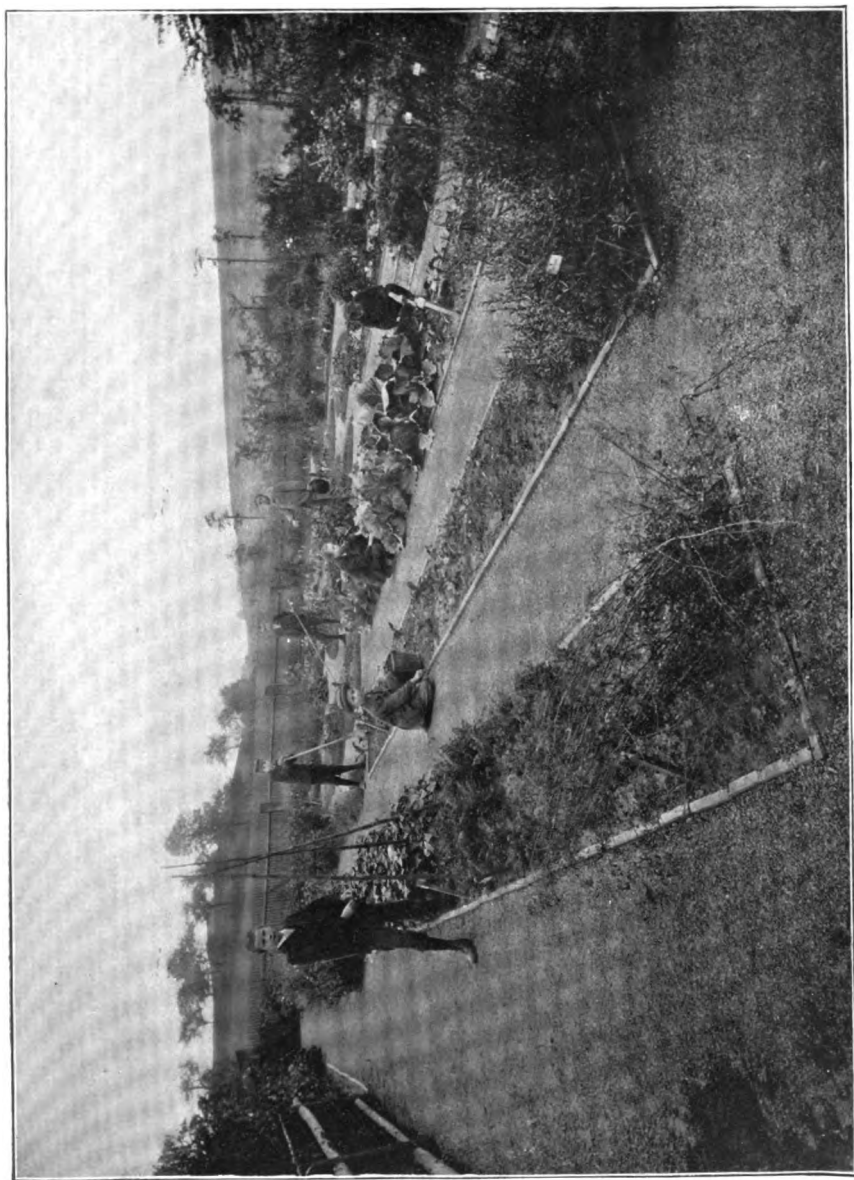
In the workshop, boys are instructed to use carpenters' and coopers' tools, and not only learn to repair but are soon able to manufacture boxes and similar articles in wood.

The whole care of the garden and grounds is intrusted under instruction to the children, who almost invariably take interest and pride in their work.

When the practical work is over for the season, bulbs and roots for pot flowers are distributed among the children, who at their homes practice the care of indoor plants.

There are six garden schools in this consular district.

President Wilsdorf, who has given the subject many years of study



SCHOOL GARDEN AT PLAUEN.



and practical application, claims for school gardening: First, that an intimate knowledge and intercourse with nature has a refining influence upon children; second, it promotes the cultivation of fruits and vegetables, which is of great importance to the maintenance and welfare of the people; third, it educates boys beyond a tendency to pilfer fruit and flowers in orchards and gardens or to maliciously injure young trees; fourth, it instills into children a fondness for rural life, and fifth, it educates children to work.

#### COOKING SCHOOLS.

In the art of cooking, the German is far behind his neighbor in Austria, and has but a faint idea of the process as compared with cooks in France and America. The Germans are a robust, healthy people, fond of exercise, and as they spend much time in the open air, can eat and digest food that would be fatal to an American stomach. The cooking department of the public school at Plauen was started by Professor Wilsdorf in 1892, and has been so eminently successful in results that four other cooking schools have since been started in and near Dresden, after the Plauen model. This room is 70 square meters in size, divided into 6 complete and separate kitchens, each containing 1 cooking stove, 1 set of kitchen utensils, 1 table, and 4 wooden stools. Four girls are assigned to each kitchen, and a class of 24 girls is instructed at each lesson.

At the Plauen school, cooking lessons are given three times each week—Tuesday, Friday, and Saturday—from 10 a. m. to 1 p. m., so that classes of 72 girls receive weekly instructions.

When a girl has reached her eighth school year, she is compelled to take instruction in cooking, so that the ages of the pupils are 13 to 14 when they commence this course. They are instructed regarding the nutritious qualities of the food being prepared, the quantity of different ingredients necessary, and in everything pertaining to preparation, cooking, and serving. They also learn the average market prices of fish, meats, vegetables, etc., and are required to keep an account of the cost of each meal. In this, they are guided by a cook book compiled at the school, and aided by a teacher in attendance with each class.

The girls are instructed in all kinds of housework, such as dishwashing, scrubbing, sweeping, dusting, washing, and mending kitchen linen. Meats, fish, spices, etc., are purchased, but the vegetables used are those raised at the school, and after a meal is prepared the girls usually eat it, although some prefer to take their share home to their parents as a sample of what they can do.

Professor Wilsdorf claims great beneficial results from this feature of his school. Girls are educated to domestic life, and many mothers report that children who were ignorant and worked only when com-

pelled to do so, developed a keen interest in household duties after a course of cooking lessons, and were able to prepare meals much more palatable than those to which the family had been accustomed, while the kitchens never before looked so clean and tidy.

His observation proves that after leaving the school, girls usually seek domestic service instead of work in factories, if they are compelled to aid in supporting the family, and those who remain at home contribute largely to the domestic comfort and harmony by their ability to prepare wholesome meals at a minimum cost.

I send herewith a photograph of the cooking room with the children at work.

CHAS. L. COLE, *Consul-General*.

DRESDEN, *July 21, 1899.*

### FRANKFORT.

Since 1896, school gardens have been established in public schools of this city where the grounds attached to the buildings were large enough to permit it. The chief object of these gardens in a city is to aid instruction in natural history, by giving practical object lessons to the children. The school board of the city of Frankfort has received such convincing proof of the utility of this method that it has resolved to provide for the establishment of a school garden with every new school building. The board is also about to establish a large central school garden for the use of schools already built.

Many cities in Germany and Austria are now laying out school gardens. They are already in operation in Breslau, Königsberg, Nordhausen, Munich, Chemnitz, and in some other cities. Even for the school children in rural places, such gardens, if properly conducted, prove highly beneficial and of great practical value, especially in the cultivation of kitchen vegetables and fruit.

The best-known literature on this subject are the publications by Professor Schwab, of Vienna, Austria, and of Chief Teacher Joh. Niessen, which can be procured through any book dealer in Germany. I would credit Mr. Grimm, member of the municipal executive council and chief of the board of education here, with the valuable information which he kindly gave me. A letter of inquiry concerning school gardens, addressed by me to the Prussian minister of education, elicited the following reply:

The Prussian administration of education has no knowledge of any such schools. However, in private boarding schools the older girls may receive instruction in cooking in connection with housekeeping lessons. As far as cooking instruction to children during their obligatory school course is concerned, it is always connected with that of "knowledge of housekeeping."

SIMON W. HANAUER,  
*Vice-Consul-General.*

FRANKFORT, *August 16, 1898.*



COOKING SCHOOL AT PLAUEN.



[Extract from the report of the special commission on establishing school gardens at Frankfort.]

The cultivating ground shall be planted mainly with one to two year plants and suitable perennial shrubs. It is most practical to divide the grounds in sections of 6½ feet in width, divided by narrow paths. These divisions are then apportioned into plots about 1 yard square.

For field flowers, the seeds are usually gathered in the fields. For the cultivation of swamp and water flowers, it is recommended to build a water basin or pond. This would also very usefully serve the purposes of an aquarium, which adds to this course of instruction. The stones for the inclosing of the basin should be taken from the native quarries, and represent the specimens most used, to serve as an object lesson in that line of mineralogy.

It is not considered necessary to employ the continuous services of a gardener. Most of the work can be done by the supervising teachers, with occasional assistance of a gardener. The expense for seeds and plants is trifling.

#### LIST OF PLANTS RECOMMENDED FOR SCHOOL GARDENS BY THE SPECIAL COMMISSION.

I. *Shade trees:* (a) Winter and summer oak, elm, white beech, silver poplar, mountain maple, walnut, acacia, plane, ash, sycamore, apple, cherry, pear. (b) Bushes in suitable parts of the garden: White birch, red beech, alder, basket willow, hawthorn, plum, apricot, peach, larch, white fir, pine, Scotch fir.

II. Between above trees and bushes are to be planted the following shrubs: Currant, gooseberry, jasmine, hazelnut, raspberry, blackberry, elderberry, Spanish lilac, silver willow, trefoil or laburnum, juniper.

III. Near these, to be planted in separate beds, are: Wild strawberry, violets, mayflower, pink, auricle, scarlet lupin, ferns. Reeds and water plants in basin, to be renewed annually: Hyacinth, tulip, onions, potatoes, crocus, leek, snowdrop.

IV and V. On separate ground and to be annually planted: (a) Grains; (b) fodder plants; (c) fibrous plants and oil-producing plants—hemp, flax, rapeseed, poppyseed, tobacco; (d) kitchen vegetables and herbs; (e) poisonous plants; (f) garden flowers—aster, sunflower, mignonette, etc.

### HAMBURG.

I have to state, in answer to the Department's circular instruction of June 8, asking for a report on school gardens, that there are no such gardens in my consular district.

HUGH PITCAIRN, *Consul.*

HAMBURG, *June 28, 1899.*

### HANOVER.

With reference to circular dated June 8, 1899, directing certain consuls to prepare a report upon the founding, progress, and practical working of school gardens, I have to say that after careful inquiry I learn there are no schools of this character in my district.

W. K. ANDERSON, *Consul.*

HANOVER, *July 14, 1899.*

## LEIPZIG.

Twenty-five years have passed since the Vienna educator, Schwab, issued pamphlets urging the establishment of school gardens in this country. Others wrote upon this subject before him, but the credit for opening up the channel leading to success belongs to him, at least as far as the pedagogic side is concerned.

Sweden, the home, if not the birthplace, of instruction in manual training, is far ahead of other countries in school gardens, and in the year 1880 had no less than 2,000. [In many parts of the United States the Swedes have gained for themselves the name of being most excellent gardeners, and their services are sought after perhaps more than those of any other nationality; and while they may be naturally good gardeners, yet their fitness for nursery work is doubtless due in many cases to the training which they received in the school gardens of Sweden, before emigrating to the United States.]

At that time, France and Belgium were far ahead of Germany with respect to school gardens. However, a close observation of the school gardens of these countries, Sweden, France, and Belgium, reveals the fact that they are giving more instruction on the practical side of gardening than they are to such work in schoolrooms; indeed the school gardens, or so-called school gardens, of these three countries have devoted almost their entire time to the cultivation of fruit and vegetables. The school gardens, not only of Saxony but of the whole of Germany, are increasing very rapidly in numbers, and under the guidance of well-trained teachers are becoming more and more valuable every day. These schools are not assisted by the State, but are aided by the school boards of their respective cities. The city officials, too, assist them. As can be readily understood, it requires no small amount of money to keep them up properly. Owing to the rapid growth of Leipzig, it became necessary to increase the number of public schools. These schools naturally require a large amount of botanical material. Although the school board provided every new institution with ground for raising botanical specimens, this was found to be not altogether satisfactory, as the old schools did not enjoy this privilege. It might be noted, however, that the old schools have gardens which they keep up, where the most useful shade trees and the most common botanic specimens are carefully nursed. These gardens, though limited in space, are of great value and assistance to the scholars and teachers.

The teachers of natural science, prior to 1888, were obliged to collect their own botanical specimens for class work, but now they are furnished with whatever material they may need for the schoolroom. In the schools of this city about two hours a week are devoted to the study of botany, and in the summer season, during the school term, the teachers take their classes out to the school garden one afternoon

a week and give them a practical lecture from the plants as they grow. Some of these school classes reach forty pupils, and formerly it was the practice of the teachers to select a few scholars to collect from the forest and meadows such plants and specimens as were needed for the lesson. The surrounding country being mostly posted (forbidding trespassing), the city officials obtained passes for the scholars selected to collect the botanical material.

This system was impracticable, because the children were oftentimes unable to gather the desired plants, and again, they were compelled to go some distance from the city in order to obtain them.

The question of providing a large and centrally located botanical garden became a very important one, and in 1888, the principals of the different schools in this city held a meeting in order to discuss this matter. The city of Leipzig donated 400 square meters (478.4 square yards) of ground to each new school—a very liberal gift, particularly as the property was rapidly increasing in value.

The teachers at the above-mentioned meeting thoroughly discussed the question of school gardens, class-room work, etc., and were unanimous in the opinion that it was of the utmost value for teachers to have opportunities for demonstrating to their respective classes from living botanical specimens; hence, they resolved to ask the city of Leipzig for a tract suitable for gardening purposes, upon which they might establish a school garden. The site which they selected was surrounded by forests, exposed to the sun, watered by the river Pleisse, and conveniently located. The area of this plat of ground is 12,000 square yards. The city of Leipzig gave them the ground, the value of which is estimated at about 250,000 marks, or \$62,500.

The Leipzig school garden is surrounded by a wooden fence, on the inside of which is a white-thorn hedge. The soil is fertile, being what is called "Aulehm" (earth deposited by the rivers in earlier periods), and was plowed deep.

At a committee meeting of the teachers, it was decided just what plants and trees should be grown in the new school garden. The garden has at present a number of plants, and gives evidence of being looked after in a careful, intelligent, and systematic way. There are flower, vegetable, and fruit divisions, all varieties of cereals and garden products, down to the most common weeds.

The garden is laid off in blocks. Each group of plants is systematically cultivated, and the names of the plants can always be seen on enameled plates, which are stuck into the ground in front of them. There are a great many groups of shade trees and shrubbery. Of the trees, perhaps the most favored is the North American *Platanis occidentalis*, which is much cultivated in this section. It can be seen on many of the streets, which are lined with trees. This tree is very strong and healthy and requires little light and care.

There is also an idyllic pond surrounded by and containing a large

variety of water plants. On the shady side of this pond rocks have been placed, so as to allow different specimens of plants to be raised which usually grow in the mountains. In the center of the garden is a rough pavilion, where the children can take shelter in case they are caught in a shower.

The botanical teachers devote much of their time to the herbs and spices which are used in the household. Vegetables, too, are especially considered, and the children are taught to utilize every nook and corner of the little gardens which some of them have at home, for the raising of kitchen supplies. In fact, those children who have garden space at home take a great interest in cultivating a few products.

It would take too much space to enumerate all the plants which the Leipzig school garden contains; the varieties of shrubbery and ground berries, poisonous and sweet; the different ferns and weeds, and the many kinds of flowers and vegetables.

The question might be asked, How does all this botanic treasure reach the schoolroom, and how is it made useful? This garden is open daily, with the exception of Sundays and holidays, from morning until evening. The teacher has sufficient opportunity to take his classes to the garden, to acquaint the pupils with the flora and impress upon their childish minds the natural growth of every useful and poisonous plant. The teachers have the right to take from the garden such material as they may want for demonstration in the class rooms. It is also possible for anyone interested in the study of botany to obtain, free of charge, specimens from the school garden. It is said that there are a great many who avail themselves of this opportunity.

In order to encourage visits to the garden, the school board distributes about every two weeks a circular, containing a list of such plants as are in bloom or have some interesting feature to be observed.

The accompanying photograph shows a class of girls at work.

The children are taught the art of transplanting and grafting trees by watching the gardener. They are not permitted to work themselves, as there are too many of them.

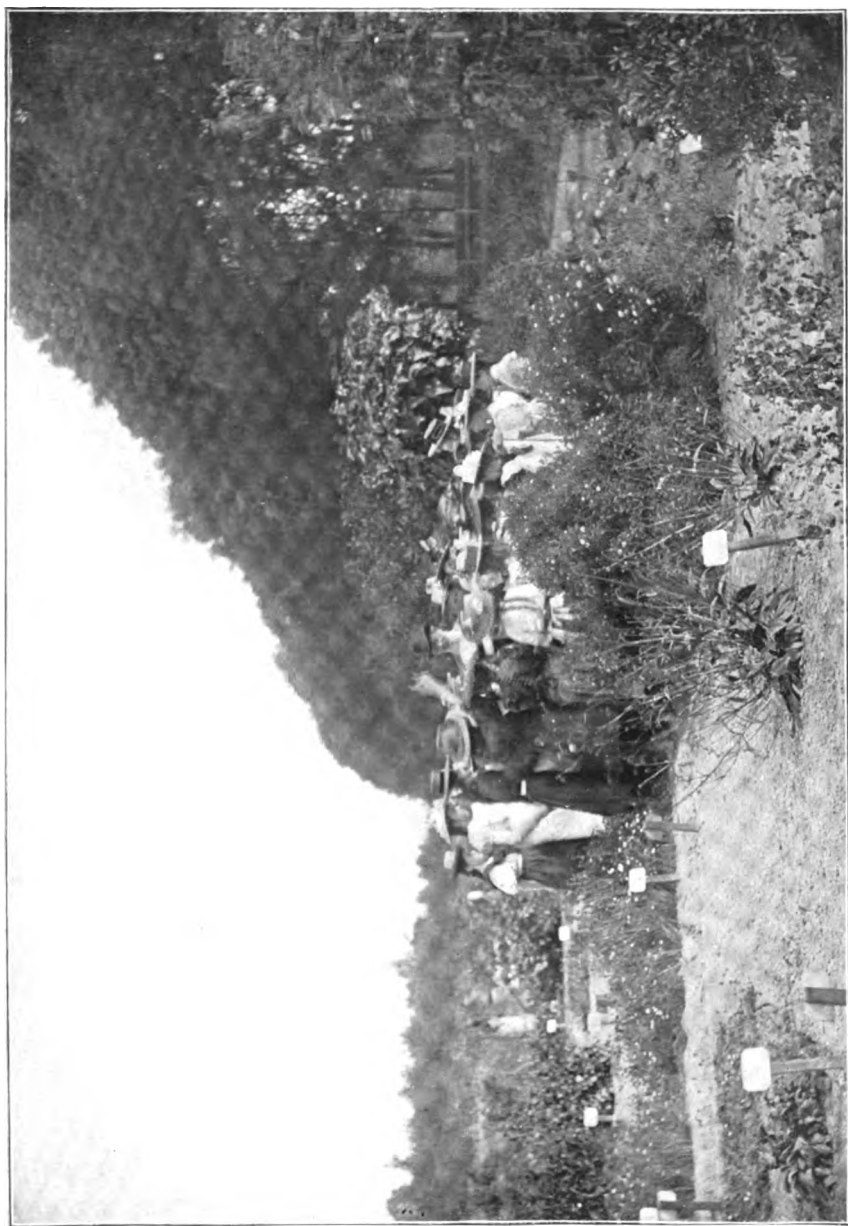
The school garden is taken care of by a head gardener and eleven assistants, numbering twelve in all, most of whom are women. Herr Stelzer has charge of the pedagogic side.

The city has, besides this garden, six school gardens in the true sense of the word. The oldest is in charge of the able teacher, Herr Hermann Richter, who permitted Mr. Emil F. Hofmann\* to see the little ones and to take photographs of them as they were working, showing very clearly how they are taught and kept busy.

The first photograph is "Knabenhort" or school-garden class of the sixth district school with their teacher, Herr Richter; some of the

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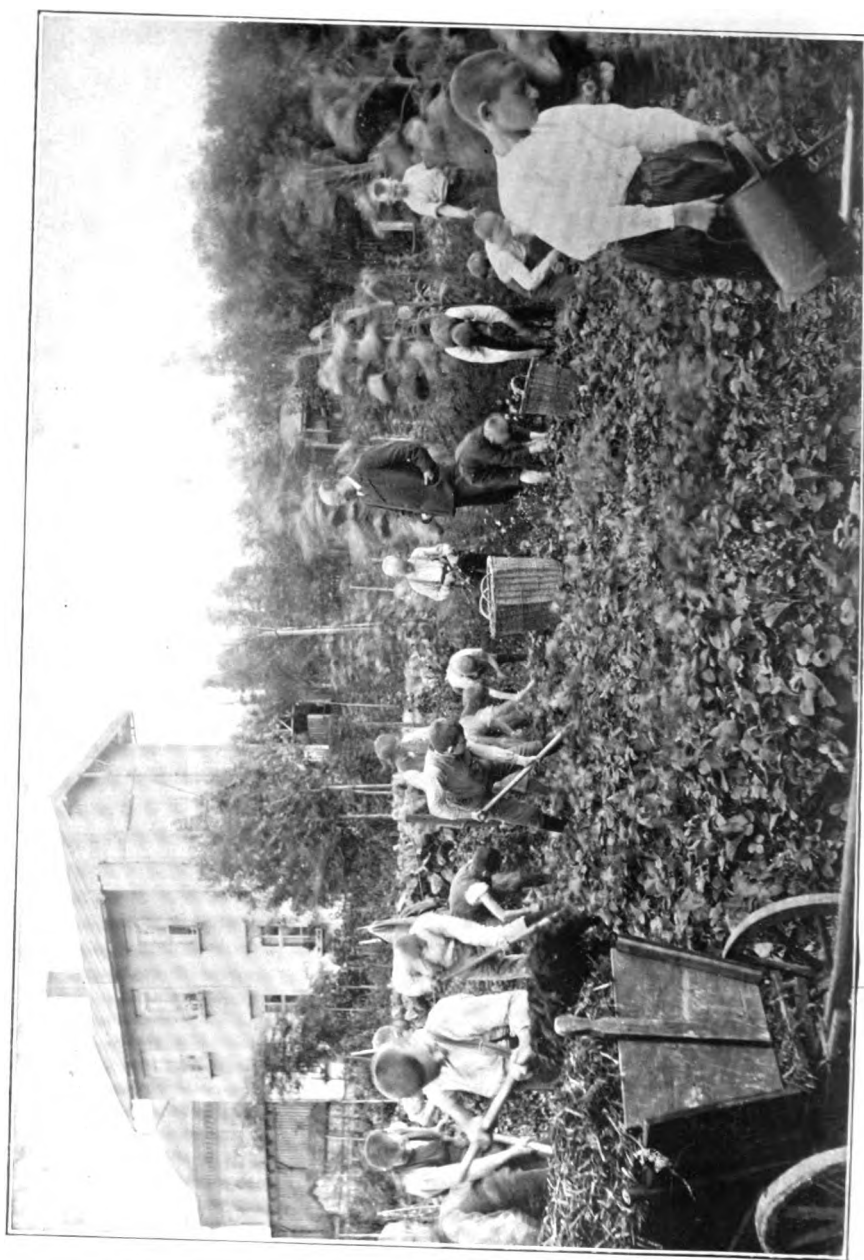
\* To whom I am indebted for the data in this report.



GIRLS AT WORK IN LEIPZIG SCHOOL GARDEN.







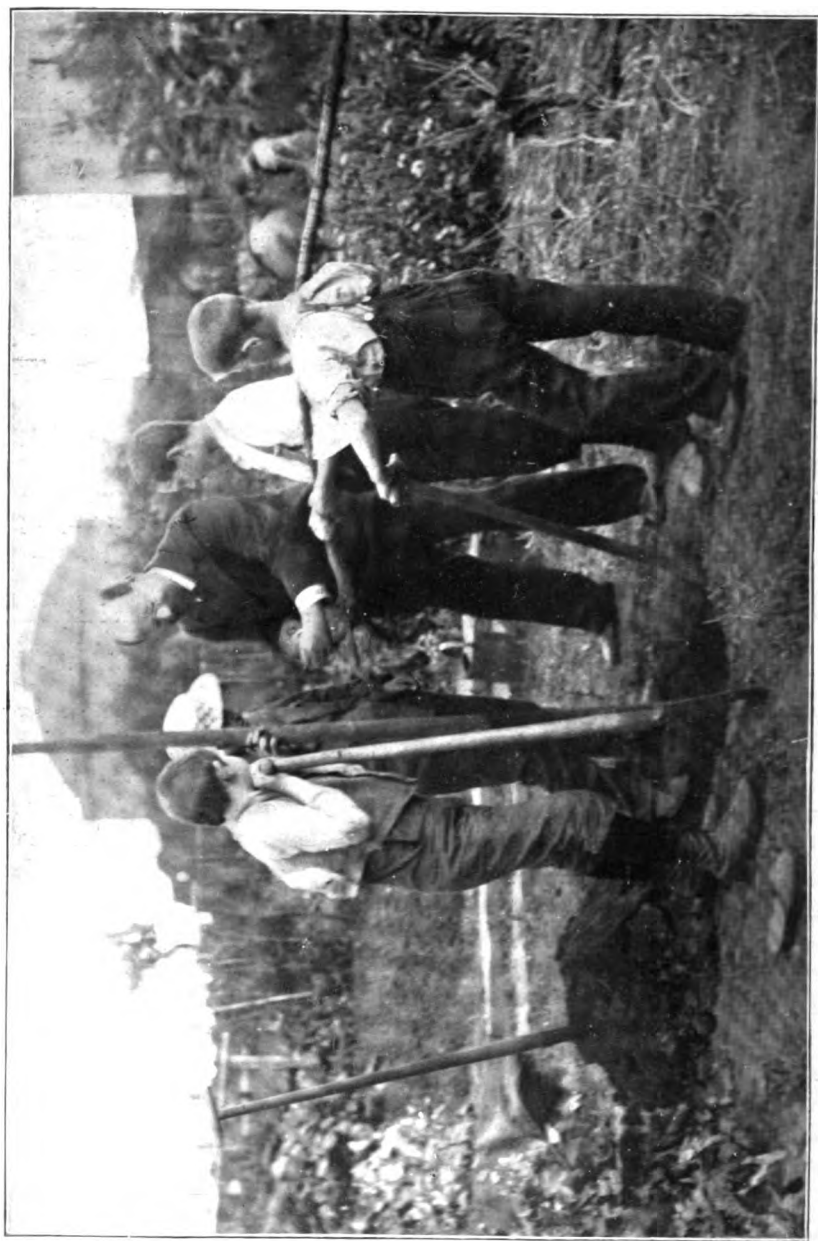
PICKING STRAWBERRIES, DIGGING, ETC.





KILLING CATERPILLARS AND BUOBS ON CABBAGE'S.





TRANSPLANTING A TREE.

scholars are picking strawberries, others are turning the soil, and still others are spreading manure.

The second shows the youngest pupils searching for and killing caterpillars and bugs in the cabbage field.

The third shows a young tree, which has been taken from the school garden, being transplanted. The teacher is demonstrating how it is done.

These six school gardens are called "Knabenhorte" and were organized for the following reason: A great many public schools have pupils whose parents are compelled to work away from home all day, and who are too poor to keep some one to look after their children during their absence, when the children are out of school. This led to the founding of the so-called "Knabenhorte" (boys' homes), where not only gardening is taught, but in the winter term, manual training as well is given.

The public schools of Germany have but four weeks' vacation in summer, two weeks at Christmas, two weeks at Easter, and two weeks in October.

When the early spring comes, the teacher and his pupils meet in the class room set aside for that purpose, and after school hours on Wednesday and Saturday afternoons, they march to their field or garden on the outskirts of the city and begin gardening. The teacher divides his class, taking the most intelligent ones for high-grade work.

In these school gardens, everything pertaining to gardening and fruit culture is taught. The children are told just what insects and bugs are destructive to plants. As a rule, this class of school gardens is open to boys only. The girls of poor parents, as above described, are instructed in dairy and kitchen work.

The dairy and cooking schools were visited, but owing to the poor light it was impossible to get any pictures of them. The little girls are taught to cook, and special attention is paid to economy in the use of eatables. The ages of the children who attend these garden, dairy, and cooking schools are from 2 to 14 years.

In this country, there are many teachers' seminaries. Mr. Hofmann, while in Bayreuth recently, paid a visit to one of these institutions and found that each teacher had a small plot of ground set aside for his use (nearly all of the teachers in the public schools of Germany are men), where he is expected to cultivate flowers and vegetables; plant and transplant trees, etc.

The idea of having teachers study gardening is a comparatively new one, and it may be said that progress has been encouraging and the results obtained have been gratifying.

BRAINARD H. WARNER, Jr., *Consul.*

LEIPZIG, *August 25, 1899.*

## MUNICH.

## KINDERGARTENS.

In Munich, there are thirteen kindergartens of the Froebel Society, one under the exclusive control of the municipal authorities and one kindergarten seminary. This last, the only institution of its kind in Bavaria, was founded in 1870 by Lorenz Illing, who is still at its head. About 700 teachers have been prepared here. It is usually attended by about 30 young ladies. Since 1889, the municipal government grants an annual appropriation of 500 marks (\$119).

The kindergartens of the Froebel Society, which in many cases may be looked upon as an appendix to the public schools, are supported by the municipal government. The recreation grounds, which as a rule are planted with trees, vary in size. In the institutions with two departments of 50 children each, the grounds generally comprise about 400 square meters (478.4 square yards). The idea of planting small botanic gardens has been advocated and carried out, but apparently without success, on account of the inability of the teachers to make proper use of these gardens for purposes of instruction.

## PUBLIC SCHOOLS.

Spacious playgrounds have been especially recommended by the former and present school commissioners, Drs. Rohmeder and Kerscheneister. It has come to be the rule to build no new schoolhouses without providing for large and adequate recreation grounds, the principle being that at least 20 square feet should be allowed for each scholar. These schools are each attended by about 2,000 children, and the size of the playground accordingly averages about 4,000 square meters. The grounds are for the most part planted with trees—horse-chestnuts, elms, linden trees, etc. In winter a part of this space is flooded, thus making a skating pond for each school.

The schools in the suburbs are provided with better and larger gardens than those in the center, partly because the former are of a more recent date, partly, also, in consequence of the enormous value of real estate in the central sections of the city. The trees and shrubbery of the school grounds are planted, trimmed, and attended to by the city gardener. In addition to the recreation grounds connected with the several schools, there are two large general playgrounds at the city limits, which are also open during vacation and are under the supervision of two teachers.

Botanic gardens are a very recent addition to public schools, their introduction being due chiefly to Drs. Rohmeder and Kerscheneister. Of the 28 public schools of Munich, not quite one-half are at present provided with botanic grounds. Formerly, these were kept by the schools themselves, but now the management has been given over to the city gardener. A large central school garden, which is to furnish

plants and shrubbery for the individual school gardens, is at present being planned by the municipal government. This is a new departure, and will no doubt be of great importance in this connection.

The size of the botanic gardens of the different schools varies greatly, being rather insignificant in the central parts of the city and increasing towards the suburbs. The botanic garden of the school in Neuhausen, a former suburb of Munich, contains about 1,000 square meters (1,196 square yards) whereas the one in Kleuze Str., in the central section, is not above 100 square meters (119.6 square yards) in size. The garden of the school in Kleuze Str. contains cereals, hemp, flax, linnets, beans, pease, and other vegetables. The garden in Neuhausen has, in addition, sections for field flowers, fruit trees, conifers, and alpine plants. This school, which was built in 1895, may be called the model school of Munich, and is visited for purposes of information by teachers from all parts of the world. It contains an excellent school kitchen, heated by gas, in which girls of the highest grade receive instruction in cooking. Teaching of this kind is given in 15 of the Munich schools. The institution also has two magnificent halls for gymnastic exercises, one for boys and one for girls, and a free bathing department, in which 37,000 baths were taken by the children during the past school year.

In addition to the exercises in the garden, the classes are taught to sow in boxes in the school room, and to observe the germination and development of plants, cereals and beans being preferably used for this purpose. The classes in which botanic instruction is given are required to cultivate cereals, pease, beans, tobacco, buckwheat, etc., in the garden, the girls of the highest grade being intrusted with the vegetable department. Besides these exercises, three or four botanic excursions into the neighborhood of the city are arranged annually, in the course of which not only the botanical but also the geographical and geological character of the country is, as far as possible, explained to the scholars. These excursions usually last three or four hours.

#### COMMERCIAL SCHOOLS.

Munich has a municipal commercial school for boys, attended by about 350 to 400 pupils. The recreation grounds, about 1,600 square meters (1,914 square yards) in area, are not planted with trees. Although well equipped in other respects, the school has no botanical garden. The city authorities, however, contemplate assigning a section of the central school garden to the institution.

#### TECHNICAL SCHOOLS.

There are two institutions of this kind in Munich. While the older one, situated in the heart of the city, has but a small space of ground attached, the new one owns a magnificent botanical garden outside of the city limits. Unfortunately, no data could be obtained, as the respective professors were absent from the city.

Botanic excursions are prescribed in these institutions, but did not take place during the past school year, because, as the annual report says, "It is forbidden almost everywhere in the neighborhood of the city to enter fields and forests." The sowing and cultivation of plants is not practiced in these schools.

#### GYMNASIA.

The Munich gymnasia are all provided with recreation grounds, which are either entirely or in part planted with trees. Most of the gymnasia have botanic gardens also, although the intense interest displayed in these gardens in the public schools is not found in the colleges. The size of the botanic section of the garden varies. In the Maximilians Gymnasium, it is about 400 square meters (478.4 square yards).

The principal object of garden instruction in the Bavarian gymnasia is to develop the capacity of observation and to arouse the interest of the pupil in natural objects. Botanic instruction is not looked upon as a preparation for a certain branch of studies, but rather as an essential part of general culture and training of the mind. The purpose of the garden is not to show a number of species to the young student, but to furnish the objects which the professor requires in training his pupils to observe the form and nature of certain plants. As far as possible, each student is given a specimen during the lesson. Most gymnasia have tables on which plants brought by the professors and students are put in glasses filled with water and marked with labels. Around this table the professor and his students assemble. When the plants begin to wither, they are replaced by fresh specimens. The students are also taught, as far as possible, to cultivate plants at home. As a rule, a botanic excursion is made by each class once a year. These excursions generally last from two to five hours. Most professors are in favor of assigning small sections of the garden to single classes or to groups of students; but, in general, the grounds are not large enough to admit of such an arrangement.

ALBERT EISENBERG,  
*Vice and Acting Consul.*

MUNICH, *July 25, 1899.*

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#### NUREMBERG.

School gardens, such as inquired for in Department of State circular, do not exist in the city of Nuremberg. There are, however, within the city district about two dozen institutions known as "Kinderbewahr-Anstalten" (homes for children). Their object is to take care of children of both sexes up to 6 or 7, at which age school attendance, or private education, becomes compulsory by the German law. It is chiefly the lower and middle classes who send their children to these





SCHOOL OF HANDICRAFT AT NUREMBERG.

homes, especially workmen, tradesmen, etc., whose occupation prevents them from properly looking after their little ones during daytime.

Kinderbewahr-Anstalten are generally open from 8 to 11 a. m. and 1 to 5 or 6 p. m., and, as a rule, are conducted by ladies who give the children rudimentary lessons in easy prayers and songs; likewise, if there is a garden or any piece of ground attached to the building, open air exercise, especially outdoor games, form an important part of the programme.

Nuremberg, with a population of 230,000 inhabitants, has one or two of these homes in each of the city districts. About 60 children are received at each home.

The fees are very small, namely, 2½ to 3 cents per child per week. The poor are charged no fee at all.

These institutions are under the patronage of wealthy citizens and are chiefly supported by private contributions; in fact, the local authorities allow them to collect contributions by going from house to house once or twice every year.

There are likewise some private infant schools in this city, known under the name of Froebel's kindergarten. These number about six, and are more expensive than the homes above described. They are not allowed to collect private contributions, the fee being 75 cents per month per child. Like the Kinderbewahr-Anstalten, they are conducted by ladies, and prayers, songs, and plays are taught the children, and, besides these, some of the well-known Froebel's play work, such as basket making, pin work, etc.

Both the homes and the Froebel's kindergarten are under the supervision of the city authorities. They send, from time to time, a sanitary officer and a school inspector to examine them.

Some five or six years ago, another school called "Handfertigkeits-Schule für Knaben" (Boys' School of Handicraft) was opened here. The idea originated in Sweden, and was brought to this city by a German lady who had studied the working of such schools in that country.

The boys are first taught cardboard work, then carpentering and general woodworking, such as carving and fret sawing. The inclosed illustration shows such a class at work.

Boys from 6 to 14 years of age are admitted to this school. The classes, lasting as a rule two hours, are held on Wednesday and Saturday afternoons, which are half holidays at the ordinary schools.

Fees are as follows: One lesson of two hours per week, 50 cents per month; 2 lessons of two hours per week, 87 cents per month.

The articles manufactured by the boys become their property.

There is also the "Königliche Kreislandwirtschafts-Schule" (Royal District Agricultural School) for boys of 10 or 11 years, who have passed through the elementary school. It has five classes, and the

graduates, at the age of 16 or 17, receive a certificate, which gives them the privilege of serving but one year in the German army.

The ordinary subjects are taught at this school—German, French, English, arithmetic, geometry, chemistry, physics, mineralogy, botany, and zoology; but special attention is devoted to agricultural subjects, such as farming, experiments in plant growth, for which purpose a large garden is attached to the school. They are also made familiar with garden and dairy appliances, agricultural machines, etc. Bee raising is likewise taught.

GUSTAV C. E. WEBER, *Consul.*

NUREMBERG, *September 12, 1899.*

### - STETTIN.

I am unable to comply strictly with the Department's circular. What are termed "landwirtschaftliche Unterrichts-Anstalten" (institutions for agricultural instructions) devote themselves to general agriculture, horticulture, gardening, etc. Schools for instruction in dairy and kitchen work do exist, but are mostly private undertakings. Illustrations for photographs showing classes at work, etc., are not to be had in this district.

The fifteenth annual convention of the National German Agricultural Society, held at Breslau the 10th of September, 1899, demonstrates in its report the advance made by German agriculturists in all their branches, and shows their admirable tenacity for cooperation, the German farmers' bulwark and stronghold.

I quote from their report as follows:

There are about 16,500 registered industrial societies in Germany; 12,736 are agricultural, of which 6,705 are connected with the national society. The agricultural societies composed 77 per cent of all the German industrial societies during the year 1899, as against 58 per cent during the year 1893. The following figures show the increase in the different branches of the national society as compared with the year 1890:

| Description.                                       | July—  |       |
|--|--------|-------|
|  | 1899.  | 1890. |
| Agricultural savings and loan societies.....       | 9,208  | 1,729 |
| Agricultural purchasing and selling societies..... | 1,040  | 537   |
| Dairy and stock societies.....                     | 1,764  | 639   |
| Miscellaneous agricultural societies .....         | 724    | 101   |
| Total .....  | 12,736 | 3,006 |

Within the last year, from July 1, 1898, to July 1, 1899, 897 agricultural societies were organized. \* \* \*

German agricultural schools are divided into three classes or grades, as follows:

A. Highest grade agricultural colleges, to which only those pupils are admitted who have had a high school education. These colleges

are more or less under the Imperial Government's supervision. The students are examined by Government officials, and are given a certificate as teacher of agriculture after satisfactorily finishing a three years' course. Of this class, there are 7 colleges in Germany.

B. Medium grade, to which pupils are admitted who have passed or are capable of passing the one-year military service examination. These schools receive a subsidy from the city or province in which they are located. Of this class, there are sixteen.

C. Lower grade, no special requirements for admission. These schools are supported by agricultural societies, or are private undertakings. The instruction is thorough in gardening, dairy, or general agricultural work.

The tuition fees range from 15 marks (\$3.58) to 180 marks (\$42.85) per season. Of this class, there are 129 schools.

There are many other schools connected more or less with agriculture, of which I mention the more important:

|   |    |
|---|----|
| Blacksmith work and horseshoeing.....     | 29 |
| Dairy work .....                          | 10 |
| Cultivation of vegetables and fruits..... | 21 |
| Care and cultivation of forests.....      | 10 |
| Housework <sup>1</sup> .....              | 27 |

The agricultural winter school in Pomerania is one of two schools in Class C located in this consular district. Two seasons constitute a full course, the season beginning November 1 and ending March 1. The hours of study are from 8 a. m. to 7 p. m., allowing from 12 to 2 p. m. for dinner and from 4 to 5 p. m. for lunch. The following table gives the subjects and the time allotted to each per week:

| Subjects.                                | First season. | Second season. |
|--|---------------|----------------|
|  | Hours.        | Hours.         |
| 1. German language.....                  | 4             | 3              |
| 2. Arithmetic .....                      | 4             | 3              |
| 3. Geography.....                        | 1             | .....          |
| 4. History .....                         | 1             | .....          |
| 5. Religion .....                        | 2             | 2              |
| 6. Drawing and designing.....            | 2             | .....          |
| 7. Writing .....                         | 1             | .....          |
| 8. Reading .....                         | 2             | .....          |
| 9. Physics .....                         | 2             | 3              |
| 10. Chemistry .....                      | 4             | 4              |
| 11. Botany .....                         | 3             | .....          |
| 12. Fruit and vegetable cultivation..... | 1             | .....          |
| 13. Natural history of farm animals..... | 3             | 1              |
| 14. Care of same.....                    | 1             | 1              |
| 15. Cultivation .....                    | 5             | 5              |
| 16. Fertilizing .....                    | 1             | 4              |
| 17. Drainage and irrigation .....        | 3             | .....          |
| 18. Surveying.....                       | .....         | 3              |
| 19. Imperial agricultural laws.....      | .....         | 1              |

<sup>1</sup> None in this district.

The scholars are generally sons of wealthy farmers, and enter the school at an average age of 19 years.

As to the institutions mentioned in Class B, they are of the boarding school type, the scholars living on the grounds. A term is one year, with a four weeks' vacation during July, the general holidays being observed.

JOHN E. KEHL, *Consul*.

STETTIN, *September 18, 1899.*

## STUTTGART.

In reply to Department's circular, I have to report that there are as yet no school gardens in operation in this consular district, but I understand that their introduction is projected.

EDWARD H. OZMUN, *Consul*.

STUTTGART, *June 27, 1899.*

## SWITZERLAND.

### AARAU.

The question of the advantage to be derived from school gardens was first agitated by the Swiss Agricultural Society about the year 1885. The success which had been attained by similar schools in Belgium, Sweden, Austria, and France prompted it to advise the different public schools of the Federation to establish classes of school gardens. It was suggested that if every community had a school garden, the people of the country would get better food and the large sums of money which were paid to foreign countries would remain at home. It was advised that the girls should devote their attention exclusively to the cultivation of vegetables and flowers, and the boys occupy themselves with the growing of trees, and vines, grafting, etc. The boys and girls should put in practice at home what they learned theoretically at school. The school garden should have beehives, as well as proper arrangements for the protection and breeding of useful birds.

The Government promised from \$40 to \$100 for every garden which should be established, and a yearly contribution of from \$10 to \$20 to aid in its maintenance. A prize of \$50 was offered for the best composition upon the subject, and 14 competitors sent more or less valuable plans. The plan which took the first prize was accompanied by suggestions and remarks, from which I have had translated the following:

#### CHOICE OF GROUND AND FIRST LABOR.

The school garden must be situated toward the south or southeast. There must be excellent, well-worked earth, neither too sandy nor too clayey. In the first case

heavier earth must be added, and in the second, lighter earth must be freely used. Stones and weeds must be removed. The earth should be prepared in autumn.

#### SIZE.

Depends on the funds available. The smallest garden must have room for the cultivation of fruit and vegetables and a few flowers.

#### HOTBEDS.

These are indispensable for growing early vegetables. One or two will suffice. They should be made of wood or beton. The bed must have four windows, each with two handles. The bed must incline toward the south. The floor is also made of beton in order to keep away mice and vermin. A layer of horse dung and a layer of good garden earth are required to fill the beds.

#### FIELD FOR EXPERIMENTS.

Every pupil of the upper form should own two beds of 2 meters<sup>1</sup> length and 1 meter breadth, where he can grow several kinds of plants.

#### CULTIVATION OF FLOWERS.

The number of garden flowers is legion. It will be best to confine ourselves to a few beautiful kinds that are not expensive or difficult to grow. We decorate the north side of the garden house with ivy; on the other sides we plant *Clematis hybrida splendens* or *Glycine chinensis*. Ferns find a place in a small bed behind the house. The flower beds will contain: In spring: (1) *Galanthus nivalis*. (2) *Leucojum vernum*. (3) *Scilla bifolia*. (4) *Tulipa gesneriana*. (5) *Narcissus poeticus*. (6) *Crocus vernus*. (7) *Viola tricolor*. (8) *Eranthis hiemalis*. (9) *Helleborus niger*. (10) *Anemone hepatica*. In summer: (1) Roses. (2) *Geraniums*. (3) *Pinks*. (4) *Asters*. (5) *Fuchsias*, etc. Evergreen should surround the beds.

Improved rose trees are very expensive, but they may be procured by transplanting the common hedge-rose tree to the garden and by grafting it as the English do. It is difficult to grow rose trees from seeds. Sunflowers should be grown, and the boys should bring home alpine plants.

The following alpine plants can easily be grown in the plain: (1) *Anemone narcissiflora*. (2) *Anemone alpina*. (3) *Ranunculus alpestris*. (4) *Aconitum napellus*. (5) *Papaver alpinum*. (6) *Arabis alpina*. (7) *Draba aizoides*. (8) *Viola biflora*. (9) *Viola calcarata*. (10) *Gypsophila repens*. (11) *Saponaria ocymoides*. (12) *Moehringia muscosa*. (13) *Sieversia montana* Sprgl. (14) *Dryas octopetala*. (15) *Potentilla aurea*. (16) *Epilobium Fleischeri*. (17) *Sempervivum arachnoideum*. (18) *Sempervivum montanum*. (19) *Saxifraga aizoon*. (20) *Saxifraga rotundifolia*. (21) *Saxifraga varians* Sieb. (22) *Aster alpinus*. (23) *Antennaria dioica*. (24) *Arnica montana*. (25) *Phyteuma hemisphaericum*. (26) *Campanula barbata*. (27) *Gentiana acaulis* Koch. (28) *Myosotis alpestris* Schmidt. (29) *Primula viscosa* All. (30) *Primula auricula*. (31) *Cyclamen europæum*. (32) *Nigritella angustifolia* Rich. (33) *Paradisica liliastrium* Bert.

In the northeast corner of the garden a shady place is formed with common forest trees and shrubs. They will protect the garden from the cold winds.

#### POISONOUS PLANTS.

These should have a place in the garden, but there should be a warning sign. The specimens should be: (1) *Atropa belladonna*. (2) *Paris quadrifolia*. (3) *Solanum*

<sup>1</sup> 1 meter=39.37 inches.

nigrum. (4) *Solanum dulcamara*. (5) *Hyoscyamus niger*. (6) *Physalis alkekengi*. (7) *Lolium temulentum*. (8) *Aethusa cynapium*. (9) *Cicuta virosa*. (10) *Conium maculatum*. (11) *Veratrum album*. (12) *Colchicum autumnale*. (13) *Digitalis purpurea*. (14) *Digitalis lutea*.

#### MEDICINAL AND INDUSTRIAL PLANTS.

In one bed should be found camomiles, mallows, althea, etc., and in another hemp, lime, madder, hops, etc.

#### FORAGE AND CEREAL GRASSES.

These different plants are so important that they should also be seen in the school garden, although they may be found in every meadow and field.

#### VEGETABLES.

All sorts of vegetables should be grown abundantly, especially nutritious kinds.

#### CULTIVATION OF FRUIT.

The country possesses 35,500,000 fruit trees; the average yield represents the sum of 24,000,000 francs (about \$4,800,000). The nursery grounds must occupy an open sunny space. The soil must be rather dry and not too well manured. Fertilizer from the stables may be used. The nursery grounds should be divided into three distinct parts. The first part is for wild stock; it should contain six beds, each 1 meter broad and 2 meters long. The second division should contain scions, cuttings, and radicles. In the third division are the improved trees. Nursery-ground trees are mostly improved by inoculation or grafting.

#### VINES.

During the last ten years, the vines of the country have yielded next to nothing. Vines are generally multiplied by cuttings and buds. By cuttings, we mean pieces of vine (1 year old) that are cut and put into the ground. They must be taken from fertile vines and must be relatively thick and have many buds or eyes. Take them from the lower part of the vine and plant preferably in good years. The work must be done in spring before the sap rises, but the cuttings can also be taken in autumn and kept in damp sand in the cellar. During the first year, the place where they grow must be carefully weeded and watered. In winter, the plants must be bent down and covered with straw, sawdust, or branches of firs. As soon as they are 80 to 100 centimeters long, they must be pruned. The third year will be the time to transplant them to the open vineyard. The earth must be good and well worked, and the dung must be entirely rotted. The American vines *Riparia*, Taylor, Solonis, and York Madeira are fertile and resist the phylloxera. The better European kinds thrive very nicely upon them.

#### FOREST PLANTS.

These grow in inferior soil, but need shade. They are raised from seeds. Small seeds must be sown plentifully. The seeds are sown in rows and must be covered with earth and then with moss or fir-tree branches. The beds must be weeded and watered. The plants with common leaves must remain one year in the seed bed, and plants with acicular leaves must remain there for two years. They are taken up with a spade. Puny plants are thrown away. They should be given 10 centimeters space each and remain two years and then be transplanted to the forest.

THE CULTIVATION OF OSIERS.

Switzerland imports \$60,000 worth of baskets every year, because the cultivation of osiers is not sufficiently known. They thrive everywhere, but their cultivation is confined to the Temperate Zone. They are grown in a damp soil, which need not be sandy. They do not thrive in dry ground that contains much lime. The plants require a good depth of well-manured soil. Ashes may be used. The plants must be slender, tough, without knots, and white when peeled. They are: (1) *Salix purpurea*; (2) *Salix amygdalina*, Koch; (3) *Salix viminalis*; (4) *Salix acutifolia*, Win.; (5) *Salix rubra*, Huds.

The different kinds should be kept separate for sale. Cuttings are to be had at \$1 per 1,000. They are planted in March. During the first summer the earth must be hoed two or three times and weeded. Later, it is hoed only in the spring. The osiers have many enemies: the convolveolus, which strangles the tendrils; wasps, hares, and mice. Hail is more pernicious to them than frost. The plants live twenty to twenty-five years, if manured every three or five years. The gaps must be filled with new cuttings. The rods are cut late in the autumn, after the leaves have fallen, with a sharp instrument, and as near the stem as possible.

FERTILIZER.

This is made from sweepings, weeds, good earth, and manure from the stables. A thin layer of unslaked lime must be put on the weeds. The heap must be kept damp. It must be removed twice during the summer.

TOOLS AND IMPLEMENTS.

These are so much alike in different countries that they need not be named.

*Estimate of cost and conclusion.*

|                                  |          |                          |          |
|----------------------------------|----------|--------------------------|----------|
| 1. Breaking up of the earth..... | \$40. 00 | 7. Bees .....            | \$32. 00 |
| 2. Manure and good earth .....   | 16. 00   | 8. Plants and seeds..... | 40. 00   |
| 3. Hotbeds .....                 | 30. 00   | 9. Utensils.....         | 20. 00   |
| 4. Summerhouse .....             | 60. 00   |                          |          |
| 5. Railings .....                | 240. 00  | Total .....              | 490. 00  |
| 6. Fountain.....                 | 12. 00   |                          |          |

Instead of buying expensive railings, a hedge might be grown all around.

A master of the Friedbühlschule at Berne laid out a school garden with the help of the pupils of different classes. They carted off 30 loads of stones and brought 150 cart loads of good earth to the place. Shrubs and trees were given by the town, the railway company, and the neighbors, and much was fetched from the forest. The grounds were fenced with wire.

The central school board at Zurich seriously undertook the subject in 1898, and issued an order which provides:

1. Near every schoolhouse of the town where space permits, a school garden shall be laid out, in which shall be grown all the indigenous and foreign plants with which the pupil becomes acquainted during the course of his instruction.
2. Those plants which are most useful to us must be given the preference, and they must be arranged according to their likeness to one another.

3. Every school garden must, if possible, contain the following groups of biological and technical plants: (a) Farinaceous plants; (b) vegetables; (c) plants that yield oil and dyes; (d) forage; (e) spices; (f) medicinal and poisonous plants; (g) plants that are grown for their leaves and blossoms; (h) aquatic plants; (i) ornamental plants; (j) trees and shrubs.

As far as space permits, plants must be grown for the use of the primary classes, and there should also be a group where the flowers are arranged according to their natural affinity. The trees and shrubs will serve to ornament the grounds that surround the schoolhouse.

4. The school garden must be sufficiently fenced in.

5. The committee shall superintend the garden and make a report thereon to the central school-board at the end of each calendar year. A register of all the plants grown in the garden shall be kept.

These orders have been carried into effect, but the date of their issuance is too recent to determine what the practical results will be. I am told, however, that the scholars have manifested much interest in the subject, and useful information is expected to be obtained.

Kitchen and house work is taught principally by the Catholic convents of Switzerland. In almost every convent in the country, there is a kitchen class in which girls are taught household work. In none of the public schools of the Federation are there classes of this nature. A great many private schools are devoted to this purpose, but the teaching is not of a high order, and from the prospectus which several of them have sent me, I have concluded that we have nothing to learn from them, and refrain from discussing them here.

In 1898, the general assembly of the twelve sections of the society for public benefit decided to start an ambulant cooking school, and the following programme was made and carried into effect:

#### GENERAL ARRANGEMENTS.

(1) The course of instruction will last three weeks; (2) the girls are to work and study from eight to nine hours on week-days; (3) two and one-half hours will be devoted to study, and six and one-half hours to work in the kitchen; (4) the pupils are expected to obey their teacher; (5) they may not leave the premises during school hours; (6) the instruction fee is 6 francs (\$1.15); (7) a public examination takes place at the end of every course; (8) a committee of ladies superintends the school.

#### PLAN OF LESSONS—SUBJECTS TAUGHT.

(1) The principal aliments and their composition; (2) how to cook plain dishes for the household and for the sick; (3) knowledge of materials, groceries, etc.; (4) how to treat and keep provisions; (5) how to buy provisions and necessary articles; (6) what the human body requires; (7) how to choose the food; (8) how to manage a household and keep accounts; (9) how to wash, how to make underwear, knit, etc.

#### PRACTICAL WORK.

(1) How to clean the cooking utensils; (2) how to use different sorts of fuel; (3) cooking; (4) preserving fruits; (5) waiting on table; (6) washing and ironing, starching, etc.; (7) how to clean and air the different rooms.

LESSONS.

From 8 to 9.30 a. m., theory; from 9.30 to 11.30 a. m., cooking (dinner); from 12 to 1 p. m., cleaning; from 1 to 2 p. m., recess; from 2 to 3 p. m., theory; from 3 to 5 p. m., cooking (supper); from 5 to 6 p. m., cleaning.

Twenty pupils are admitted to every course. Meat is cooked only every other day. Dinners are served at 60 centimes (11 cents) per person, and suppers at 40 centimes (8 cents). The society is not a financial success; the loss it sustains amounts to about 200 francs (\$38.60) during each course. The managers carry about with them from town to town all the necessary utensils and paraphernalia.

At Zurich, Basel, Lucerne, St. Gall, and Berne there are cooking schools, under the direction of the school board, very much upon the same plan.

HENRY H. MORGAN, *Consul*.

AARAU, *August 1, 1899.*

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BERNE.

I have to acknowledge the receipt of the Department's circular calling for a report on school gardens, and to report that after due investigation, I find that there are none in my district, hence a report on the subject can not be made.

ADOLPH L. FRANKENTHAL,  
*Consul*.

BERNE, *October 16, 1899.*

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GENEVA.

The garden school of Geneva is situated almost within the city limits, at the suburb of Chatelaine. It is styled "L'École Cantonale d'Horticulture de Genève."

This school was founded July, 1887, by M. Edmond Vaucher, a nursery-tree gardener and horticulturist of Chatelaine. With the aid of some philanthropical citizens of Geneva, M. Vaucher opened his school as a private enterprise with fifteen pupils, and ended the year with twenty-three.

Unlike the famous garden school at Versailles, France, and other similar institutions, this was established as a boarding school, and has been so maintained. M. Vaucher, the principal and founder, is a thoroughly trained officer of the Swiss army, and has from the very beginning maintained the strictest discipline in the direction of the school—a much sharper discipline, indeed, than is observed even in the public schools of Switzerland. On a recent occasion, when two

pupils attempted to bring about a general condition of insubordination in the school, Professor Vaucher promptly applied his own ideas of military discipline, and not only expelled the disturbers, but warned all the other pupils that any expression of sympathy with them would be similarly punished. This fact is mentioned simply to illustrate the strict character of discipline that is maintained.

From the very beginning, it may be stated that the Geneva Garden School, although then and now operated on a very small scale, was successful. It was an enterprise that appealed to the good sense of the working people, as well as to the sympathy of the richer classes. At the outset, the price of board and instruction was fixed at 700 francs (about \$135) a year for each pupil. In order to lighten this expense, several of the French-speaking Cantons made an arrangement with the school by which native-born citizens of the Cantons in question were to pay but 350 francs a year, or one-half of the regular charge. The Cantons referred to paid the remainder *pro rata*.

In regard to the course, two years were deemed sufficient for the practical as well as for the theoretical training. Eight professors were engaged for the theoretical courses, as follows:

One for arboriculture, one for botany, one for general floriculture, one for perennial plants, one for vegetable growing, one for bee culture, one for the French language, and one for singing.

Five more teachers were engaged to superintend practical work—one for arboriculture, one for floriculture, one for gardening, one for vegetable growing, and another for carpentering, basket work, and tool repairing.

The school opened, as above stated, in July, 1887, with fifteen pupils. During the four years that followed, the method of training was not much altered; more professors were engaged, however, to teach the following branches: Landscape architecture, bookkeeping and surveying, special flower culture, sylviculture, vine culture, and Alpine-plant growing.

At the end of the academic year in 1891, the classes were led by 15 theoretical and practical teachers. The number of pupils for each academic year up to the end of 1891 was as follows: 27 during 1887-88, 34 during 1888-89, 32 during 1889-90, 33 during 1890-91.

The usefulness of such a school being thus absolutely demonstrated, a yearly subsidy was asked of the Confederation. This was quickly granted by legislative action in March, 1891, and the school thus became official and took the title of The Geneva Cantonal Garden School.

Special conventions were then concluded between the Canton of Geneva and other Cantons of the French part of Switzerland, by which each made an annual appropriation for the school. The Canton of Berne, of which a small part may be classed as French-speaking,

agreed to give 400 francs (\$77) a year; the Canton of Vaud, 2,000 francs (\$386), and Geneva, 6,000 francs (\$1,158). By virtue of the law of June 27, 1884, for the betterment of agriculture, the federal department of agriculture agreed to pay one-half of the salaries of the teachers, as well as one-half of the cost of materials and tools used for practical tuition.

The total sum annually granted by the Confederation and the Cantons thus became 23,000 francs (\$4,439). Principal Vaucher put his own ground (about 15 acres) at the disposal of the new institution for the practical tuition of the students, as well as his buildings, and with a corps of well-chosen professors, it was but a matter of management to run a good school.

In March, 1891, M. Vaucher was officially confirmed in his functions of principal of the school by the council of state of the Canton of Geneva, and at the same time the council decided to appoint all professors itself in the future, adding another year to the course of tuition, which was thus brought up to three years. A commission of well-qualified men was also appointed for two years, to supervise the method of teaching. The Canton of Vaud, by special permission, subsequently appointed the principal of the agricultural institute of Lausanne to represent this Canton on the commission.

On the 1st of July, 1894, the appropriation granted to the school by the Canton of Geneva was raised to 8,000 francs (\$1,544) instead of 6,000 francs (\$1,158), and this for a period of sixty years. Some modifications in the faculty were also made this year. The council of state appointed a professor for physics and astronomy, also one for vegetable pathology and agricultural zoology. It was decided that the practical teaching should be superintended in each specialty by a chief, pupils being taught, group after group, every branch of garden culture. In the same year, the department of agriculture asked the school to furnish the department a regular service of agricultural analyses. This has since been done in the laboratory of the school. Analyses of earth, dung, insecticides, and water for domestic use are made by the pupils under the direction of a professor.

The total expenses of the school have been:

|              | Francs. | Dollars. |              | Francs. | Dollars. |
|--------------|---------|----------|--------------|---------|----------|
| 1891-92..... | 22,244  | 4,298    | 1894-95..... | 24,419  | 4,718    |
| 1892-93..... | 22,590  | 4,360    | 1895-96..... | 24,956  | 4,817    |
| 1893-94..... | 22,223  | 4,289    | 1896-97..... | 24,007  | 4,633    |

Salaries of teachers and cost of tools are included in the above.

The school, as stated, is operated on a small scale. It can offer beds to only 36 pupils in three dormitories. Thus it has occasionally happened, as was the case in 1890 and 1896, that some of the pupils must

secure sleeping quarters outside of the school building in the neighborhood. This, in a manner, interferes with the discipline and is not considered desirable.

The school accepts citizens of all countries as pupils, but naturally Switzerland itself furnishes the largest quota. The following table shows the detailed character of the attendance from 1891 up to 1898, inclusive:

| Years.        | Geneva. | Other cantons. | Foreign. | Total. |
|---------------|---------|----------------|----------|--------|
| 1891-92 ..... | 11      | 17             | 5        | 33     |
| 1892-93 ..... | 18      | 15             | 7        | 35     |
| 1893-94 ..... | 19      | 18             | 6        | 43     |
| 1894-95 ..... | 16      | 19             | 7        | 42     |
| 1895-96 ..... | 17      | 22             | 4        | 43     |
| 1896-97 ..... | 18      | 24             | 4        | 41     |
| 1897-98 ..... | 10      | 25             | 6        | 41     |

During the past five years, gardeners' diplomas have been delivered to 48 graduates, and the principal of the school has been able to secure excellent places for all of these who have asked his assistance in that direction. Some of them have been given positions in Switzerland; others have gone to France, England, Germany, and even to Egypt. For the past three years, the Union of Agricultural Societies of French Switzerland has offered a prize for the best pupil of the third year of the Geneva School, and the alumni of the school, who seek to maintain a lasting bond between the graduates, have also offered a modest prize to the second best pupil of the third year. The school, as above stated, has about 15 acres of ground, every foot of which, except that occupied by the buildings, is closely cultivated. It presents a fine appearance with flower beds, grassplots, vegetable gardens, hedges, and all sorts of trees.

There are two principal buildings on the grounds. In the larger there is a large schoolroom, well lighted and ventilated, as well as a dining room and three dormitories containing 6 to 7 beds each, with plenty of air and light, and four other bedrooms for the superintendent and certain pupils who prefer not to sleep in the dormitories and can afford to pay extra (about \$19 per year) for private rooms.

In the smaller building is found the laboratory, built and fitted up after the more famous one at Versailles. Here, infected plants are treated and all sorts of experiments made. In this building are also located the study and the workshop and, on the upper floor, some additional sleeping rooms.

The pupils of the school are principally boys, between 16 and 20 years of age. No pupil is received whose age is under 15½ years.

The course of study is essentially practical in all its details. The pupils are divided into first, second, and third year classes. Pupils of

the first year spend two-thirds of each working day in practical work, such as learning the use of tools, elementary gardening, tree nursing, and vegetable growing. The remainder of the day is spent in theoretical study and in learning the French language thoroughly.

Pupils of the second year give three-quarters of each day to practical work, and are particularly taught hothouse culture, plant nursing, tree trimming, grafting, and bee culture.

Practical work occupies four-fifths of the third-year pupil's day. He studies theory at night. The students of this, the finishing year, must take weekly turns at superintending the fine hothouses of the school. They must cultivate and develop choice early vegetables, study artistic plant grouping, bouquet making, etc.

Examinations take place at the end of each academic year, and the pupils who have made 50 per cent of the maximum points for each branch are admitted to the next higher class.

An official diploma of gardener is delivered to all pupils who have made 50 per cent of the maximum points in the examinations of the third-year class. The weekly notes are also taken into consideration for the examinations, but as regards practical work, only the percentage of the third year and not that of the three years is mentioned on the diploma.

In considering the detail of study, it may be interesting to glance at the "order of the day" for May 4 and 10, and June 11, 1899, which I took at random from the school board in the the study anteroom:

*Thursday, May 4, 1899.*—Practical: Section A, arboriculture and tree nursing; section B, vegetable growing; section C, gardening. Theory: 7.30 to 8, reciting lessons; 8 to 9.15, vegetable growing; 7.30 to 9, botany; 10.45 to 12, forced culture.

*Wednesday, May 10, 1899.*—Practical: Section A, gardening; section B, arboriculture and tree nursing; section C, vegetable growing. Theory: 7.30 to 8.45, bookkeeping; 8.45 to 9.45, reciting lessons; 9.15 to 10.30, arboriculture; 7.30 to 9, vegetable growing; 10.45 to 12, practical arboriculture.

Order of the day of Sunday, June 11, 1899: Preaching, 9.30; watchers, 2 pupils; kept back, 3 pupils. Permissions: From Saturday afternoon to Monday morning, 1 pupil; from Saturday night to Sunday night, 7 pupils; Sunday, from 7.30 a. m. to 9 p. m., 6 pupils; Sunday, from 1 p. m. to 9 p. m., 4 pupils.

Every-day programme for the months of June and July, 1899: 5, getting-up time; 5 to 5.30, washing and dressing; 5.30 to 7, practical work; 7 to 7.30, breakfast; 7.30 to 12, lessons and practical work; 12 to 12.15, preparing for dinner; 12.15 to 2, dinner and rest; 2 to 4, practical work; 4 to 4.20, afternoon meal and rest; 4.20 to 6.45, practical work; 6.45 to 7, preparing for supper; 7, supper; 7 to 9, recreation; 8.30, bedtime; 9, compulsory bedtime for the two lower classes; 9.30, compulsory bedtime for the upper class.

In December, the getting-up time is 7 instead of 5 o'clock and work ends at 6.30.

It may be observed in conclusion that the school, although official, does not really belong either to the Canton or Confederation, as the grounds and buildings are all owned by the principal, Monsieur

Vaucher. It is certain, however, that the Canton of Geneva will within the near future become the owner of all the property.

For the time being, the principal sells for his own profit all the young trees, plants, fruits, flowers, and some of the vegetables, but it is thought that when the Canton becomes the owner of the property, the plants and trees will be used for the ornamentation of the public parks and gardens, and the vegetables will be donated to the hospitals and asylums.

The accompanying illustration shows students training peach trees on a garden wall.

BENJ. H. RIDGELY, *Consul*.

GENEVA, *July 25, 1899.*

---

### ST. GALL.

I have to acknowledge receipt of Department's circular requesting a report upon "school gardens."

In answer to this request, I would state that upon investigation I have been informed that no such schools exist in this consular district.

JOSEPH SIMON,

*Vice and Deputy Consul-General.*

ST. GALL, *August 1, 1899.*

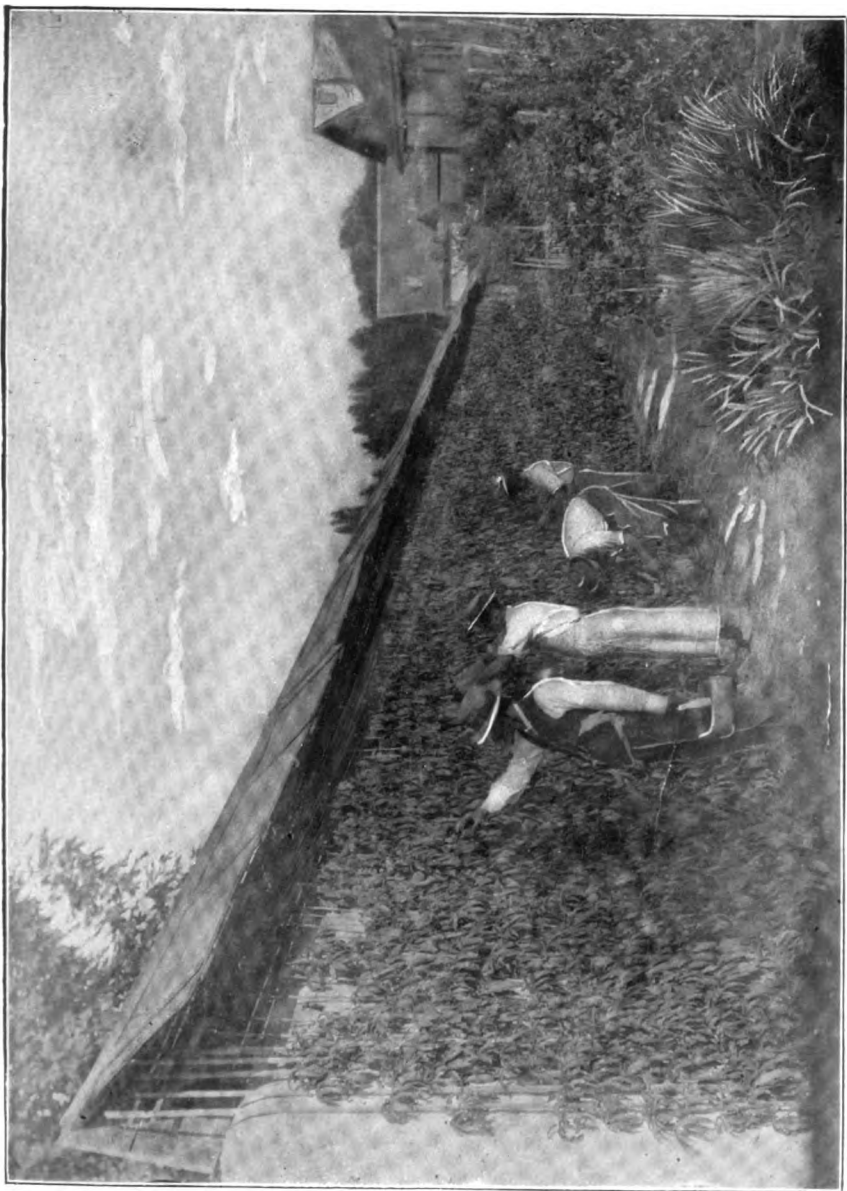
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### ZÜRICH.

The founding of school gardens was frequently and repeatedly agitated in Swiss agricultural and industrial societies, with no definite result up to 1884. On April 15, 1884, Mr. M. Vogler, of Rohrdorf, delivered an address before the directors of the Swiss Agricultural Society, in which he called attention to the fact that school gardens had been for years in successful operation in Belgium, Sweden, and Austria. He called special attention to the necessity of the cultivation of vegetables and fruits, and he recommended the offering of prizes for the best plans and essays on school gardens.

The directors of the Swiss Agricultural Society formulated a programme for establishing school gardens, and submitted it to the Federal Government through the Swiss agricultural department for approval. This is the beginning of school gardens in Switzerland.

Eight hundred francs were offered in prizes for the best plans and essays on school gardens. Fourteen plans were handed in and 8 received prizes—250 francs down to 50 francs (\$50 to \$10). Out of these 8, 4 were finally declared the best; the plans were adopted and ordered published, together with the essays.



TRAINING PEACHES ON WALL AT GENEVA.



In 1888, there were 17 of these school gardens in operation, and they have increased from year to year.

In Zürich, an effort is being made to establish a garden in connection with every schoolhouse, and it is confidently expected that this will be accomplished within two years.

The benefits and good results of these school gardens are to be seen on every hand, in the country as well as in the cities of Switzerland. On every foot of ground, on the front, sides, and rear of houses, one can see either flowers, vegetables, fruit trees, or shrubbery planted. When no ground is to be had, window sills, balconies, porches, railings, etc., are used to advantage.

A. LIEBERKNECHT, *Consul.*

ZÜRICH, *September 5, 1899.*

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## PUBLICATIONS OF THE BUREAU OF FOREIGN COMMERCE.<sup>1</sup>

The publications of the Bureau of Foreign Commerce, Department of State, are:

I.—**COMMERCIAL RELATIONS**, being the annual reports of consular officers on the commerce, industries, navigation, etc., of their districts.

II.—**CONSULAR REPORTS**, issued monthly, and containing miscellaneous reports from diplomatic and consular officers.

III.—**ADVANCE SHEETS**, **CONSULAR REPORTS**, issued daily, except Sundays and legal holidays, for the convenience of the newspaper press, commercial and manufacturing organizations, etc.

IV.—**EXPORTS DECLARED FOR THE UNITED STATES**, issued quarterly, and containing the declared values of exports from the various consular districts to the United States for the preceding three months.

V.—**SPECIAL CONSULAR REPORTS**, containing series of reports from consular officers on particular subjects, made in pursuance to instructions from the Department.

Following are the special publications issued by the Bureau prior to 1890:

Labor in Europe, 1878, one volume; Labor in Foreign Countries, 1884, three volumes; Commerce of the World and the Share of the United States Therein, 1879; Commerce of the World and the Share of the United States Therein, 1880-81; Declared Exports for the United States, First and Second Quarters, 1883; Declared Exports for the United States, Third and Fourth Quarters, 1883; Cholera in Europe in 1884, 1885; Trade Guilds of Europe, 1885; The Licorice Plant, 1885; Forestry in Europe, 1887; Emigration and Immigration, 1885-86 (a portion of this work was published as **CONSULAR REPORTS** No. 76, for the month of April, 1887); Rice Pounding in Europe, 1887; Sugar of Milk, 1887; Wool Scouring in Belgium, 1887; Cattle and Dairy Farming in Foreign Countries, 1888 (issued first in one volume, afterwards in two volumes); Technical Education in Europe, 1888; Tariffs of Central America and the British West Indies, 1890.

The editions of all these publications, except Tariffs in Central America, etc., are exhausted, and the Department is, therefore, unable to supply copies.

In 1890 the Department decided to publish reports on special subjects in separate form, to be entitled **SPECIAL CONSULAR REPORTS**. There are now the following **SPECIAL CONSULAR REPORTS**:

*Vol. 1 (1890).*—Cotton Textiles in Foreign Countries, Flax in Spanish America, Carpet Manufacture in Foreign Countries, Malt and Beer in Spanish America, and Fruit Culture in Foreign Countries.

*Vol. 2 (1890 and 1891).*—Refrigerators and Food Preservation in Foreign Countries, European Emigration, Olive Culture in the Alps Maritimes, and Beet-Sugar Industry and Flax Cultivation in Foreign Countries.

*Vol. 3 (1891).*—Streets and Highways in Foreign Countries. (New edition, 1897.)

*Vol. 4 (1891).*—Port Regulations in Foreign Countries.

*Vol. 5 (1891).*—Canals and Irrigation in Foreign Countries. (New edition, 1898.)

*Vol. 6 (1891 and 1892).*—Coal and Coal Consumption in Spanish America, Gas in Foreign Countries and India Rubber.

*Vol. 7 (1892).*—The Slave Trade in Foreign Countries and Tariffs of Foreign Countries.

*Vol. 8 (1892).*—Fire and Building Regulations in Foreign Countries.

*Vol. 9 (1892 and 1893).*—Australian Sheep and Wool and Vagrancy and Public Charities in Foreign Countries.

*Vol. 10 (1894).*—Lead and Zinc Mining in Foreign Countries and Extension of Markets for American Flour. (New edition, 1897.)

*Vol. 11 (1894).*—American Lumber in Foreign Markets. (New edition, 1897.)

*Vol. 12 (1895).*—Highways of Commerce. (New edition, 1899.)

*Vol. 13 (1896 and 1897).*—Money and Prices in Foreign Countries.

*Vol. 14 (1898).*—The Drug Trade in Foreign Countries.

*Vol. 15 (1898).*—Part I. Soap Trade in Foreign Countries; Screws, Nuts, and Bolts in Foreign Countries; Argols in Europe; Rabbits and Rabbit Furs in Europe, and Cultivation of Ramie in Foreign Countries. Part II. Sericulture and Silk Reeling and Cultivation of the English Walnut.

*Vol. 16 (1899).*—Tariffs of Foreign Countries. Part I. Europe. Part II. America. Part III. Asia. Part IV. Africa. Part V. Australasia and Polynesia. (Parts III, IV, and V not yet published.)

*Vol. 17 (1899).*—Disposal of Sewage and Garbage in Foreign Countries; Foreign Trade in Coal Tar and By-Products.

*Vol. 18 (1900).*—Merchant Marine of Foreign Countries.

*Vol. 19 (1900).*—Paper in Foreign Countries, and Uses of Wood Pulp.

*Vol. 20 (1900).*—Part I. Book Cloth in Foreign Countries; Market for Ready-Made Clothing in Latin America; Foreign Imports of American Tobacco; Cigar and Cigarette Industry in Latin America. Part II. School Gardens in Europe. Part III. The Slave Trade in Foreign Countries.

Of these **SPECIAL CONSULAR REPORTS**, Australian Sheep and Wool, Cotton Textiles in Foreign Countries, Flax in Spanish America, Fire and Building Regulations, Gas in Foreign Countries, Lead and Zinc Mining, Malt and Beer in Spanish America, Port Regulations, Refrigerators and Food Preservation, Vagrancy, etc., are exhausted, and no copies can be supplied by the Department.

There was also published in 1899, Proclamations and Decrees during the War with Spain, comprising neutrality circulars issued by foreign countries, proclamations by the President, orders of the War and Navy Departments, and war decrees of Spain.

Of the monthly **CONSULAR REPORTS**, many numbers are exhausted or so reduced that the Department is unable to accede to requests for copies. Of the publications of the Bureau available for distribution, copies are mailed to applicants without charge. In view of the scarcity of certain numbers, the Bureau will be grateful for the return of any copies of the monthly or special reports which recipients do not care to retain. Upon notification of willingness to return such copies, the Department will forward franking labels to be used in lieu of postage in the United States, Canada, the Hawaiian Islands, and Mexico.

Persons receiving **CONSULAR REPORTS** regularly, who change their addresses, should give the old as well as the new address in notifying the Bureau of the fact.

In order to prevent confusion with other Department bureaus, all communications relating to consular reports should be carefully addressed, "Chief, Bureau of Foreign Commerce, Department of State, Washington, U. S. A."

<sup>1</sup> Formerly Bureau of Statistics. Name changed to Bureau of Foreign Commerce by order of the Secretary of State, July 1, 1897.

**SPECIAL CONSULAR REPORTS.**

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# **THE STAVE TRADE**

**IN**

## **FOREIGN COUNTRIES.**

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**REPORTS FROM THE CONSULS OF THE UNITED STATES IN COMPLIANCE  
WITH A CIRCULAR FROM THE DEPARTMENT OF STATE.**

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**VOL. XX—PART III.**

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**Issued from the Bureau of Foreign Commerce.**



**WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1900.**



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## DEPARTMENT CIRCULAR.

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DEPARTMENT OF STATE,  
*Washington, September 16, 1899.*

*To the consular officers of the United States.*

GENTLEMEN: Messrs. Mario Liebman & Co., New York, exporters of white-oak staves, write to the Department as follows:

In 1891 your Bureau of Statistics issued a circular to the consuls inquiring as to the condition of the stave trade, resulting in the issuing of your Special Consular Report on the Stave Trade. This pamphlet was of considerable value to those interested in this industry, and has been used constantly ever since by the trade in order to prepare staves for the foreign markets. But as this is now seven years old, and as the trade for staves abroad has almost entirely changed from the facts given in that pamphlet, we beg to call your attention to the fact that it will be of great value to the stave dealers in this country if your Department would kindly get more recent information regarding the stave used and the kinds of staves desired in foreign countries, particularly in Europe, Africa, and Australia. The last two continents are markets which have been opened since the pamphlet referred to was published. Besides, at that time the Austrian market for staves was a competitor to this country, but within the last three or four years the forests of Austria have been exhausted and Austrian dealers in staves are coming to this country to locate, we being practically the only country that has white oak suitable for staves. This gives the United States an opportunity of practically furnishing the entire consumption of white-oak staves in Europe, and as we are interested in opening up new markets for American staves abroad we would feel extremely obliged for any information which the Department could obtain for us through its consular service.

While we might obtain this information direct from the consuls in some instances, we believe that the matter is of so much importance to the public interested in the stave industry in this country that a publication of fresh information regarding the use, customs, and necessities of foreign markets in white-oak staves, such as this country can produce, will materially increase the exportation of this article. As the Department of State knows, we have an unlimited supply of white oak, but the sizes that we now make are not all adequate to the present requirements of the foreign stave trade.

The circular letter sent to the consuls in 1891, from which resulted the Special Consular Reports, the Stave Trade in Foreign Countries, issued in 1892, was as follows:

GENTLEMEN: You are instructed to report upon the stave trade in your respective districts, so as to cover the following outline:

- (1) Give an approximate estimate of the number and value of staves used.
- (2) The kind of staves in greatest demand.
- (3) The source of supply and the cost to the consumer of the various kinds.

- (4) Describe the condition in which staves should be delivered in order to command the best price and to give the most satisfaction.
- (5) Give the correct dimensions of the staves in use.
- (6) State the kind of timber most desirable for the particular kind of stave desired.
- (7) The conditions of supply and demand.
- (8) Whether any American staves are sold at present in your district.
- (9) Any general information obtainable which is not called for in the eight interrogatories above.

In compliance with the foregoing request, and in conformity with the instruction of 1891, you will please make the necessary investigations into the subject under consideration and report results for publication in a special number of Consular Reports.

I am, gentlemen, your obedient servant,

THOS. W. CRIDLER,  
*Third Assistant Secretary.*

## METRIC WEIGHTS AND MEASURES.

[Reduced to United States equivalents.]

### Metric weights:

- Milligram ( $\frac{1}{1000}$  gram) equals 0.0154 grain.
- Centigram ( $\frac{1}{100}$  gram) equals 0.1543 grain.
- Decigram ( $\frac{1}{10}$  gram) equals 1.5432 grains.
- Gram equals 15.432 grains.
- Decagram (10 grams) equals 0.3527 ounce.
- Hectogram (100 grams) equals 3.5274 ounces.
- Kilogram (1,000 grams) equals 2.2046 pounds.
- Myriagram (10,000 grams) equals 22.046 pounds.
- Quintal (100,000 grams) equals 220.46 pounds.
- Millier or tonne—ton (1,000,000 grams) equals 2,204.6 pounds.

### Metric dry measures:

- Milliliter ( $\frac{1}{1000}$  liter) equals 0.061 cubic inch.
- Centiliter ( $\frac{1}{100}$  liter) equals 0.6102 cubic inch.
- Deciliter ( $\frac{1}{10}$  liter) equals 6.1022 cubic inches.
- Liter equals 0.908 quart.
- Decaliter (10 liters) equals 9.08 quarts.
- Hectoliter (100 liters) equals 2.38 bushels.
- Kiloliter (1,000 liters) equals 1.308 cubic yards.

### Metric liquid measures:

- Milliliter ( $\frac{1}{1000}$  liter) equals 0.0888 fluid ounce.
- Centiliter ( $\frac{1}{100}$  liter) equals 0.338 fluid ounce.
- Deciliter ( $\frac{1}{10}$  liter) equals 0.845 gill.
- Liter equals 1.0567 quarts.
- Decaliter (10 liters) equals 2.6418 gallons.
- Hectoliter (100 liters) equals 26.418 gallons.
- Kiloliter (1,000 liters) equals 264.18 gallons.

### Metric measures of length:

- Millimeter ( $\frac{1}{1000}$  meter) equals 0.0394 inch.
- Centimeter ( $\frac{1}{100}$  meter) equals 0.3937 inch.
- Decimeter ( $\frac{1}{10}$  meter) equals 3.937 inches.
- Meter equal 39.37 inches.
- Decameter (10 meters) equals 393.7 inches.
- Hectometer (100 meters) equals 328 feet 1 inch.
- Kilometer (1,000 meters) equals 0.62137 mile (3,280 feet 10 inch).
- Myriameter (10,000 meters) equals 6.2137 miles.

### Metric surface measures:

- Centare (1 square meter) equals 1,550 square inches.
- Are (100 square meters) equals 119.6 square yards.
- Hectare (10,000 square meters) equals 2.471 acres.



# THE STAVE TRADE IN FOREIGN COUNTRIES.

## EUROPE.

### AUSTRIA-HUNGARY.

#### OAK FORESTS OF CROATIA AND SLAVONIA.

Latest available statistics as to the forests of Croatia and Slavonia show that the oak forests cover an area of 1,004,673 acres and annually yield 50,279,840 cubic feet of wood, of which area 870,634 acres, annually supplying 45,361,100 cubic feet of wood, come into consideration for the manufacture of staves. The average annual yield of wood of the collective oak forests of Croatia and Slavonia in 1894, on the basis of the average yield shown by the tax register of landed property, comprised 42,645,577 cubic feet for an area of 830,125 acres. At the close of 1894, the supply of material in oaks in Croatia and Slavonia is given at 271,016,638 cubic feet.

According to the average of the years 1885-1894, 8,792 acres (1,805 acres being public property) were annually felled, which area is far greater than the normal area of felling. In explanation it must be added that Croatia and Slavonia still possess many thousands of acres of oak forests, the wood from which, already standing too long, must be worked up as quickly as possible, if its value is not to be diminished materially. The present time of sprouting in oak forests comprises only from eighty to one hundred and twenty years.

The well-known oak of Croatia and Slavonia exists in 14 districts, of which the following are the principal:

| Districts.            | Acres.  | Cubic feet. |
|-----------------------|---------|-------------|
| Banat .....           | 49,430  | 2,560,238   |
| Gradiškan .....       | 51,843  | 2,964,176   |
| Peterwardein .....    | 59,636  | 3,524,952   |
| Brod .....            | 75,285  | 4,538,415   |
| Comitat Pozega .....  | 87,940  | 4,060,086   |
| Comitat Belovar ..... | 104,071 | 5,440,012   |
| Comitat Agram .....   | 172,890 | 8,153,276   |
| Comitat Verocze ..... | 217,216 | 10,969,863  |

The largest oak-forest owner in Croatia and Slavonia is the Government, whose property is 169,134 acres, of which 96,073 acres consist of from one to sixty years' growth of timber and about 71,000 of an average growth of from one hundred and fifty to two hundred and

fifty years. That a great part of these forests is overripe for stave making is shown by the circumstance that the normal increase per year ought to comprise 10,833,428 cubic feet, while the actual increase amounts to only 4,978,253 cubic feet. From this arises the necessity to clear up the overripe timber as quickly as possible, as keeping to a normal area of felling would only financially damage the forest owner.

The second largest forest owner is the "Grenzinvestirungsfond" (fund for frontier investments), under state administration, then come the communities possessing forests, the disforestation communities, and, lastly, private owners.

The names and localities of the most important of the forest-owning communities are: Banat I, Glina; Banat II, Petrinja; Peterwardein, Mitrowitz; Brod, Vinkovce; Kreutz, Belovar; St. Georg, Belovar; Gradiskan, Neu Gradiskan; Ogulin, Ogulin; Otocac, Otocac; Sluin, Karlstadt.

The numerous disforestation communities are of small importance, but large oak forests are owned by the city of Pozega, the estates of Daruvar, Pakracz, Kutjevo, Czernik, and Prestovac, and finally by large owners, such as the Duke of Schaumburg-Lippe, Prince Thurn-Taxis, Prince Odescalchi, Count Pejacservics, Count von Normann-Ehrenfels, Count Jankovich, Countess Maylath, Rustum Djakovar, and others.

#### NUMBER AND VALUE OF STAVES.

For a better knowledge of the number and selling price of oak staves (some are made of beech wood also), the following table is given:

| Year. | Number.    | Average price per 1,000. | Year. | Number.    | Average price per 1,000. |
|-------|------------|--------------------------|-------|------------|--------------------------|
| 1874  | 46,080,000 | \$70.00                  | 1887  | 51,008,000 | \$90.40                  |
| 1875  | 56,159,000 | 88.00                    | 1888  | 54,539,000 | 94.40                    |
| 1876  | 39,616,000 | 90.00                    | 1889  | 61,206,000 | 100.00                   |
| 1877  | 36,166,000 | 86.00                    | 1890  | 44,386,000 | 98.00                    |
| 1878  | 34,230,000 | 82.00                    | 1891  | 67,882,000 | 84.00<br>to<br>92.00     |
| 1879  | 32,238,000 | 82.00                    | 1892  | 41,449,000 |                          |
| 1880  | 43,910,000 | 82.00                    | 1893  | 60,078,000 |                          |
| 1881  | 34,109,000 | 72.20                    | 1894  | 54,476,000 |                          |
| 1882  | 35,787,000 | 82.00                    | 1895  | 34,128,000 | 84.00<br>to<br>92.00     |
| 1883  | 51,254,000 | 92.00                    | 1896  | 42,244,000 |                          |
| 1884  | 46,597,000 | 89.20                    | 1897  | 35,386,000 |                          |
| 1885  | 50,543,000 | 89.60                    | 1898  | 37,916,000 |                          |
| 1886  | 35,652,000 | 84.40                    | 1899  | 40,000,000 |                          |

By the close of 1899 there will probably be none at all, or only a very small quantity of the staves manufactured in the foregoing periods.

The table above quoted, although published by the Agram Chamber of Commerce, is not quite exact, as the numbers given comprise only the quantity of staves, including the Bosnian, that were actually

exported via Fiume and Trieste, while, as a matter of fact, the production of the later years was greater by a round 10,000,000, which were sold only during the course of the present year, including the greater part of the production of the last season, 1898-99.

#### PRODUCTION AND MANUFACTURE.

Judging from the sales of oak made this year, it may already be asserted with a reasonable amount of certainty that the production of the coming season, 1899-1900, will scarcely reach the figure of 10,000,000 staves. In addition, inland stave-wood producers have stopped work entirely as far as German barrel wood is concerned, and to a great extent in French staves. Thus the way is now open for the United States in Austria, not to speak of Germany.

About 150 manufacturers were engaged in the production of French and German staves in Slavonia and Croatia, and these were divided as follows: One hundred, with 20 managers and 5,060 workmen, in the manufacture of French staves, and 50, with 8 managers and 2,050 workmen, in the manufacture of German staves, which latter were exported, almost without exception, by way of Budapest and Vienna.

#### *Export of staves from Hungary.*

| Year.                           | To Austria (exclusive of Trieste). | To Germany. |
|---------------------------------|------------------------------------|-------------|
|                                 | Tons.                              | Tons.       |
| 1895 .....                      | 37,640                             | 16,690      |
| 1896 .....                      | 35,380                             | 21,920      |
| 1897 .....                      | 36,120                             | 19,420      |
| 1898 .....                      | 27,390                             | 19,420      |
| 1899 (first half of year) ..... | 9,020                              | 8,830       |

The above are all so-called "Binderholz"—that is, German staves—and for the greater part of Croatian-Slavonian origin, since French staves are exported exclusively via Fiume and Trieste. An average of the last five years shows that about 3,000 carloads (30,000 tons) of barrel wood annually went from Hungary to Austria and about 1,700 carloads (17,000 tons) annually to Germany, where the staves were employed primarily to cover the needs of the brewing and liquor industries, and, secondly, to make casks for the vintage of the Rhine and Moselle regions.

#### VALUE AND PRICES.

The value of the staves produced in Croatia and in Slavonia amounted on an average to from \$4,000,000 to \$5,000,000 annually. In order to estimate the export value from the statistical table, it should be stated that 100 staves are usually rated at 660 pounds, and that the average prices given in the table of French staves serve for

the number of 1,000, and are computed from Trieste and Fiume or Sissek.

The prices of German staves are computed per old Austrian "Eimer" (a wine measure containing 14.94 gallons), and the selling price of such an Eimer can be approximately set at 56 cents, while the cost amounts to from 46 to 48 cents. The costs of stave-wood production in Slavonia are composed of the expense of the raw material, wages, transportation of the finished staves from the forest to railroad or steamship station, and outlay for business management. On the basis of the customary unit of computation, the Austrian eimer, the cost at the place of production is as follows in Austria and the United States:

| Description.  | Slavonia. | United States. |
|---|-----------|----------------|
|   | Cents.    | Cents.         |
| Raw wood .....  | 36        | 5              |
| Wages .....   | 6         | 14             |
| Transportation to railroad or steamship station ..... | 2         | 5              |
| Carrying on business .....                            | 3         | 8              |
| Total .....   | 47        | 32             |

This relation becomes even more unfavorable to Austria when the freight expenses of Slavonian and American staves to central European places of consumption are compared. While the prepaid freight by the carload per Austrian eimer from the banks of the Save River to Mayence or Frankfort-on-the-Main is 14 cents, to Leipsic or Dresden 12 cents, the cost of freight of American staves to the seaboard, of ocean freight and insurance, exchange rate in Rotterdam, and freight on the Elbe or Rhine to Mayence or Frankfort, Leipsic, or Dresden amounts to but 22 or 23 cents. Considering the infinitely greater distance between points of production and consumption, the American stave is vastly cheaper than the Slavonian stave. Thus from Austrian points of sale Slavonian staves come to 60 cents per eimer, American to 53 cents. The latter, therefore, in spite of the enormous distance, are 7 cents less than the Slavonian product, owing chiefly to the cheapness of the raw lumber. It is claimed by Austrian experts that as regards quality, the American stave is inferior to the dearer Slavonian product. The oak in Croatia, Slavonia, and Bosnia is distinguished by a peculiar quality which gives to red wine a darker color and particular flavor; besides, the staves are famed for their excellent formation, the workmen in these provinces being unexcelled in their craft. It was for this reason that certain American firms, which have for several years been manufacturing stave wood in America, employ several hundred workmen from Croatia and Carniola in order to meet in particular the requirements of French buyers, as to measurement and shape of staves. It must be mentioned that the prices of round timber, owing partly to competition among stave

manufacturers, still more, however, to the rivalry among buyers of round timber and manufacturers of oak material, have risen almost 100 per cent, attaining this present year such a height that, even leaving out American competition in staves for the French market, stave manufacturers in Croatia and Slavonia can no longer see their way to any profit.

This is the chief reason that so many of the larger producers have withdrawn from the business. The price of oak wood in the tree per cubic meter (35.316 cubic feet) increased as follows from 1888 to 1899: 1888, \$3.79; 1890-91, \$4.34 to \$4.40; 1892-1895, \$5.69 to \$5.92; 1896, \$6.98; 1897, \$6.20; 1898, \$6.16; 1899, \$7.20. The latter figure was obtained at the auction of the "Grenzinvestirungsfond" in Agram. It should be mentioned that the buyers of the forest lots parceled out at this sale were all round timber producers and manufacturers of oak material made according to the Paris standard, while the prices of the ready French staves could not be correspondingly raised, and the prices of stave wood even went down considerably. Only the future can show whether the condition of the stave market may not change after all, and the prices of round timber in the tree go down considerably.

#### KIND OF STAVES IN GREATEST DEMAND.

Before proceeding to the description of stave dimensions and quality of the wood, it must be mentioned that the Croatian and Slavonian oak is utilized for two purposes: (1) For sawing into planks, beams, etc., and (2) for splitting into staves. For the former, perfectly sound oaks are requisite, while for split wood, hence staves or cooper wood, every trunk may be employed, even if but a portion of it is still sound and fit for use. Producers here are forced by the high trunk prices to work up each oak to the very thinnest uppermost part, so that from 60 to 70 per cent of the same quality of staves and from 30 to 40 per cent of inferior quality result. In the United States, where the raw wood is cheap, only the trunks of the trees, and of these the longest and best paid kinds, are taken.

If our manufacturers desire not only to gain the Austrian stave market but to retain it as a permanent field, they should conform to the trade rules laid down for both these articles in Austria-Hungary, which hold good also in the stave markets of Europe.

#### WOOD AND STAVE RULES.

The most important of the new rules to be laid down for stave wood and staves in the new standard read in English as follows:

Three kinds of wood are distinguished: First, so-called German stave wood; second, "preSSIONS" wood, that is, wood thick enough for beer kegs and sufficiently strong to withstand the pressure exercised by the carbonic-acid gas contained in beer; and third, wood for vats,

known in the trade here as "bottich" wood. These three kinds must be of oak (*quercus cerris* excepted), and be split from the trunk in vertical direction, so that the medullary rays are visible on the cleft surface. The staves must have the minimum prescribed dimensions, be well squared at the ends, and smoothly hewn.

German staves, when not otherwise stipulated, are traded in per net or complete Austrian eimer (measure containing 14.94 gallons), staves and headings corresponding in dimensions to the given number in the subjoined table. Three layers of closely laid staves bearing the same number and some two inches broader (as surplus) than the prescribed width, form the staves of one barrel, and two layers of closely laid heading pieces of the same number, exceeding the prescribed width by  $1\frac{1}{2}$  inches, form the heading of one barrel; the three layers of staves constitute two-thirds, the two layers of heading pieces one-third of the eimer bearing the number in question. In staves, the measure of length is taken at the shortest part; of heads, at the center.

#### DIMENSIONS OF STAVES.

The following table gives the minimum dimensions of length, thickness and width:

| No. | Staves.          |                  |         |        | Headings. |                                     |                            |        |  |
|-----|------------------|------------------|---------|--------|-----------|-------------------------------------|----------------------------|--------|--|
|     | Length.          | Thickness.       |         | Width. | Length.   | Thick-<br>ness of<br>heart<br>edge. | Width<br>of door<br>piece. | Width. |  |
|     |                  | End.             | Middle. |        |           |                                     |                            |        |  |
|     | Cm. <sup>1</sup> | Mm. <sup>2</sup> | Mm.     | Cm.    | Cm.       | Mm.                                 | Cm.                        | Cm.    |  |
| 1   | 34               | 27               | 22      | 5      | 25        | 27                                  |                            | 7      |  |
| 2   | 42               | 27               | 22      | 5      | 34        | 27                                  |                            | 7      |  |
| 3   | 47               | 27               | 22      | 5      | 37        | 27                                  |                            | 7      |  |
| 4   | 52               | 27               | 22      | 5      | 42        | 27                                  |                            | 8      |  |
| 14  | 58               | 27               | 22      | 5      | 47        | 27                                  |                            | 8      |  |
| 2   | 65               | 27               | 22      | 6      | 52        | 27                                  |                            | 8      |  |
| 24  | 70               | 27               | 22      | 6      | 55        | 27                                  |                            | 8      |  |
| 3   | 75               | 33               | 25      | 6      | 58        | 33                                  |                            | 8      |  |
| 34  | 79               | 33               | 25      | 6      | 62        | 33                                  |                            | 8      |  |
| 4   | 82               | 33               | 25      | 6      | 65        | 33                                  |                            | 9      |  |
| 44  | 85               | 33               | 25      | 6      | 67        | 33                                  |                            | 9      |  |
| 5   | 88               | 33               | 25      | 6      | 70        | 33                                  |                            | 9      |  |
| 6   | 94               | 33               | 25      | 6      | 75        | 33                                  |                            | 9      |  |
| 7   | 99               | 33               | 25      | 6      | 79        | 33                                  |                            | 9      |  |
| 8   | 103              | 40               | 30      | 7      | 82        | 40                                  |                            | 10     |  |
| 9   | 108              | 40               | 30      | 7      | 85        | 40                                  |                            | 10     |  |
| 10  | 112              | 40               | 30      | 7      | 88        | 40                                  |                            | 10     |  |
| 11  | 115              | 40               | 30      | 7      | 92        | 40                                  |                            | 10     |  |
| 12  | 119              | 40               | 30      | 7      | 94        | 40                                  | 26                         | 11     |  |
| 13  | 122              | 40               | 30      | 7      | 97        | 40                                  | 26                         | 11     |  |
| 14  | 125              | 45               | 35      | 8      | 99        | 45                                  | 28                         | 12     |  |
| 15  | 128              | 45               | 35      | 8      | 101       | 45                                  | 28                         | 12     |  |
| 16  | 131              | 45               | 35      | 8      | 103       | 45                                  | 28                         | 12     |  |
| 17  | 133              | 45               | 35      | 8      | 106       | 45                                  | 28                         | 12     |  |
| 18  | 136              | 45               | 35      | 8      | 108       | 45                                  | 28                         | 12     |  |
| 20  | 141              | 50               | 35      | 9      | 112       | 50                                  | 30                         | 12     |  |
| 22  | 145              | 50               | 35      | 9      | 115       | 50                                  | 30                         | 12     |  |
| 23  | 148              | 50               | 35      | 9      | 117       | 50                                  | 30                         | 12     |  |
| 25  | 152              | 50               | 35      | 9      | 121       | 50                                  | 30                         | 12     |  |
| 26  | 158              | 50               | 35      | 9      | 125       | 50                                  | 30                         | 12     |  |
| 30  | 161              | 55               | 35      | 9      | 128       | 55                                  | 31                         | 13     |  |
| 32  | 165              | 55               | 35      | 9      | 131       | 55                                  | 31                         | 13     |  |
| 35  | 170              | 55               | 35      | 9      | 135       | 55                                  | 31                         | 13     |  |
| 38  | 174              | 55               | 35      | 9      | 139       | 55                                  | 31                         | 13     |  |
| 40  | 177              | 60               | 40      | 10     | 141       | 60                                  | 32                         | 13     |  |
| 45  | 185              | 60               | 40      | 10     | 146       | 60                                  | 32                         | 13     |  |
| 50  | 191              | 60               | 40      | 10     | 152       | 60                                  | 32                         | 13     |  |
| 55  | 197              | 60               | 40      | 10     | 157       | 60                                  | 32                         | 13     |  |

<sup>1</sup> 1 centimeter equals 0.3937 inch.

<sup>2</sup> 1 millimeter equals 0.0394 inch.

| No.  | Staves.          |                  |         |        | Headings. |                           |                      |        |
|------|------------------|------------------|---------|--------|-----------|---------------------------|----------------------|--------|
|      | Length.          | Thickness.       |         | Width. | Length.   | Thick-ness of heart edge. | Width of door piece. | Width. |
|      |                  | End.             | Middle. |        |           |                           |                      |        |
|      | Cm. <sup>1</sup> | Mm. <sup>2</sup> | Mm.     | Cm.    | Cm.       | Mm.                       | Cm.                  | Cm.    |
| 80   | 203              | 70               | 40      | 10     | 161       | 70                        | 32                   | 13     |
| 85   | 200              | 70               | 40      | 10     | 166       | 70                        | 32                   | 13     |
| 70   | 214              | 70               | 40      | 10     | 170       | 70                        | 32                   | 13     |
| 75   | 219              | 70               | 40      | 10     | 173       | 70                        | 32                   | 13     |
| 80   | 223              | 80               | 45      | 11     | 177       | 80                        | 32                   | 14     |
| 85   | 227              | 80               | 45      | 11     | 182       | 80                        | 32                   | 14     |
| 90   | 232              | 80               | 45      | 11     | 185       | 80                        | 32                   | 14     |
| 95   | 236              | 80               | 45      | 11     | 188       | 80                        | 32                   | 14     |
| 100  | 241              | 80               | 50      | 11     | 191       | 80                        | 33                   | 14     |
| 105  | 245              | 80               | 50      | 11     | 195       | 80                        | 33                   | 14     |
| 110  | 249              | 80               | 50      | 11     | 197       | 80                        | 33                   | 14     |
| 115  | 252              | 80               | 50      | 11     | 200       | 80                        | 33                   | 14     |
| 120  | 256              | 80               | 50      | 11     | 203       | 80                        | 33                   | 14     |
| 125  | 259              | 80               | 50      | 11     | 206       | 80                        | 33                   | 14     |
| 130  | 263              | 80               | 50      | 11     | 209       | 80                        | 33                   | 14     |
| 135  | 266              | 80               | 50      | 11     | 212       | 80                        | 33                   | 14     |
| 140  | 269              | 90               | 55      | 11     | 214       | 80                        | 34                   | 15     |
| 145  | 272              | 90               | 55      | 11     | 217       | 80                        | 34                   | 15     |
| 150  | 275              | 90               | 55      | 11     | 219       | 80                        | 34                   | 15     |
| 155  | 279              | 90               | 55      | 11     | 221       | 80                        | 34                   | 15     |
| 160  | 282              | 90               | 55      | 11     | 223       | 80                        | 34                   | 15     |
| 170  | 288              | 90               | 55      | 11     | 227       | 80                        | 34                   | 15     |
| 180  | 293              | 95               | 55      | 11     | 232       | 85                        | 35                   | 15     |
| 190  | 298              | 95               | 55      | 11     | 236       | 85                        | 35                   | 15     |
| 200  | 303              | 95               | 55      | 11     | 241       | 85                        | 35                   | 15     |
| 220  | 313              |                  |         |        | 249       |                           |                      |        |
| 240  | 322              |                  |         |        | 256       |                           |                      |        |
| 250  | 327              |                  |         |        | 259       |                           |                      |        |
| 280  | 339              |                  |         |        | 280       |                           |                      |        |
| 300  | 347              |                  |         |        | 275       |                           |                      |        |
| 350  | 365              |                  |         |        | 280       |                           |                      |        |
| 400  | 382              |                  |         |        | 303       |                           |                      |        |
| 450  | 396              |                  |         |        | 315       |                           |                      |        |
| 500  | 411              |                  |         |        | 327       |                           |                      |        |
| 600  | 438              |                  |         |        | 347       |                           |                      |        |
| 800  | 494              |                  |         |        | 382       |                           |                      |        |
| 1000 | 518              |                  |         |        | 411       |                           |                      |        |

<sup>1</sup> 1 centimeter equals 0.3937 inch.<sup>2</sup> 1 millimeter equals 0.0394 inch.

Form No. 200 up, thickness and maximum number of pieces are supplied according to agreement.

If not otherwise arranged, the following maximum number of parts per barrel of staves and heads are called merchantable:

| No.    | Number of staves. | Number of head-ing pieces. | No.      | Number of staves. | Number of head-ing pieces. |
|--------|-------------------|----------------------------|----------|-------------------|----------------------------|
| 1.     | 13                | 5                          | 14-18.   | 33                | 11                         |
| 1-1.   | 15                | 6                          | 20-28.   | 35                | 12                         |
| 1-1.   | 17                | 7                          | 30-38.   | 37                | 12                         |
| 2-2.   | 20                | 8                          | 40-55.   | 40                | 13                         |
| 3-4.   | 23                | 8                          | 60-85.   | 43                | 14                         |
| 5-6.   | 25                | 9                          | 90-135.  | 45                | 15                         |
| 7-9.   | 28                | 10                         | 140-200. | 48                | 16                         |
| 10-18. | 31                | 11                         |          |                   |                            |

One layer of heading pieces must not contain more than two side pieces, the rest consisting of middle pieces. From No. 12 up, every barrel must also contain a door piece. The width of the door pieces is measured only at the broader end; the other end may be 3 centimeters (1½ inches) narrower. The door and middle pieces may be one-fourth and the side pieces one-half part thinner than the minimum thickness of the heart edge.

If a certain assortment is specified and is not complete on delivery, the buyer is free to limit the acceptance of the remainder of the consignment, containing the full number ordered, in such proportion as there is merchantable ware on hand in the incomplete assortment. If not otherwise agreed upon, the packed quantity is delivered and accepted whole.

"Pressions" and vat wood shall be as straight as possible. The staves Nos.  $\frac{1}{2}$ , 1, and 2 shall be supplied 3 centimeters ( $1\frac{1}{4}$  inches) longer than the ordinary staves. In fresh condition, the end thickness of the staves Nos.  $\frac{1}{2}$  and 1 shall comprise at least 42 millimeters ( $1\frac{1}{2}$  inches), that of the staves Nos. 2 to 6 at least 48 millimeters (1.5 inches). "Pressions" headings are merchantable only in the Nos.  $\frac{1}{2}$ , 1, and 2, and must be at least 40 millimeters ( $1\frac{1}{4}$  inches) thick at the heart edge. Vat staves must be made straight, be quite flawless on both surfaces, and, in fresh condition, have a middle thickness of at least 52 millimeters ( $1\frac{1}{2}$  inches).

#### AMERICAN STAVES IN AUSTRIA-HUNGARY.

In conclusion, be it remarked that since 1892, American staves have found use in Austria, imported either direct or introduced by commission merchants. The largest buyers of American staves hitherto have been Dreher's brewery, in Klein Schwechat, and the new "Genossenschaft"-brewery, in Pilsen. In the near future, the new breweries in Vienna and Pilsen are to lay in barrels of American wood manufactured by a well-known barrel factory in Cassel, Germany.

The following table shows the total import of American staves into Austria:

| Year.                       | Via Trieste-Fiume. |                | Via Germany. |                | Direct. |                |
|-----------------------------|--------------------|----------------|--------------|----------------|---------|----------------|
|                             | Tons.              | Price per ton. | Tons.        | Price per ton. | Tons.   | Price per ton. |
| 1892.....                   | 137.7              | \$19.20        | 538.6        | \$22.40        | .....   | .....          |
| 1893.....                   | 203.6              | 22.00          | 534.3        | 28.00          | 702.9   | \$20.00        |
| 1894.....                   | 1,221.3            | 24.00          | 506.3        | 24.80          | 1,539   | 24.00          |
| 1895.....                   | 1,278.9            | 23.30          | 464.1        | 38.60          | 628.6   | 28.30          |
| 1896.....                   | 778.3              | 26.00          | 821.5        | 40.00          | 1,781.3 | 26.00          |
| 1897.....                   | 1,060.3            | 26.00          | 1,204.1      | 40.00          | 1,071.1 | 24.00          |
| 1898.....                   | 186.8              | 26.00          | 871.4        | 26.00          | 1,086.6 | 30.00          |
| 1899 (first half year)..... | 131.8              | 26.00          | 347.9        | 26.00          | 213.8   | 30.00          |

The above-quoted prices include freight as far as the Austrian or Hungarian frontier.

The most important points for American exporters of staves to this country to bear in mind are: First, good quality of the raw material; second, exact measurement; third, neat shaping; and, fourth, punctual delivery of the ordered goods. These faithfully observed, there is no reason why a successful business in this important line should not be maintained in Austria-Hungary. Care, however, should be taken not to overstock the market.

CARL BAILEY HURST,  
Consul-General.

VIENNA, November 25, 1899.

## AUSTRO-HUNGARIAN STAVE-TRADE USAGES.

It may be both interesting and profitable for the American producer of staves to know the customs observed in the Austro-Hungarian stave trade. I therefore subjoin a translation of the rules originally adopted by the producers and shippers of staves in Croatia and Slavonia and now observed throughout the Austro-Hungarian Monarchy.

*French staves.*—When French staves are offered for sale as “common run” (*monte vergine*), the ware should be in the condition in which it comes out of the forest, namely, consisting of staves of all qualities and sizes, but always classified according to length, width, and thickness.

*Select culls.*—If the contract calls for “select” (*merce in monte*), it is understood to apply to staves which are distinguished from “*monte vergine*” only in that all fair and inferior culls (*scartons* and *fire scartons*) have been taken out.

*Good culls.*—The term “good culls” (*buono scarto*) is understood to apply to staves which (a) in consequence of defective working show unevenness in the length, width, or thickness of a piece to such a degree that the difference in length is more than one-tenth of the average length and the difference in width or thickness is more than one-fourth of the average width or thickness; (b) have a curve deflecting from the straight line more than 7 millimeters in a distance of 33 centimeters; (c) are bent or warped, provided the bend or warp is not more than  $\frac{5}{4}$  of the average thickness of the upper end; (d) show ice fissures or black or red stripes, but only on one end or side; (e) show spots where the bark is grown in or where knots are grown in, that do not, however, pass through the entire thickness of the stave.

*Fair culls.*—Fair culls (*scarton*) comprise all staves which show the following defects: (a) Two or more bends lengthwise; (b) being bent or twisted in the direction of their width, the bend or twist amounting to more than  $\frac{5}{4}$  of the average thickness of the head end; (c) being worm-eaten, but having not more than five little wormholes or one large wormhole. [Staves which while being stored have been invaded by meal worms do not belong to the class called “fair culls” (*scarton*), but must be classed, if otherwise adequate, with “selects” (*merce in monte*) or “good culls” (*scart*)]; (d) fissures, or red or black stripes, when these defects pass through the entire thickness of the stave, or when they appear on both sides; (e) grown-in bark extending through the entire thickness of the stave; (f) knots or fissures passing through the entire thickness, as well as the same defects when they occur on both sides, even without extending from one side to the other.

*Inferior culls.*—Staves are classed as inferior culls (so-called *fire scarton*) (a) if they have more than five little wormholes on their wide side or more than one large wormhole either on the wide or joint side; (b) if more than half of their surface shows red or black stripes which

pass through the entire thickness of the stave; and (c) if they are unsound or decayed.

*Measuring system.*—While France adheres to the old system of measuring staves (1 meter=3.07844 Paris feet), Austro-Hungarian inland dealers retain and use it together with the metric system. Accordingly the following measures have been adopted in conformity with the system prevailing in France.

*Length of staves.*

| From—   |               | To—     |               | Invoiced as— |               |
|---------|---------------|---------|---------------|--------------|---------------|
| Meters. | Paris inches. | Meters. | Paris inches. | Meters.      | Paris inches. |
| 0.49    | 18            | 0.52    | 20            | 0.49         | 18½           |
| .60     | 22            | .73     | 26            | .63          | 24.2          |
| .76     | 28            | .89     | 32            | .79          | 30.2½         |
| .92     | 34            | 1.05    | 38            | .95          | 36.3          |
| 1.08    | 40            | 1.22    | 44            | 1.11         | 42.3½         |
| 1.25    | 46            | 1.38    | 50            | 1.28         | 48.4          |
| 1.41    | 52            | 1.59    | 56            | 1.44         | 54.4½         |
| 1.62    | 58            | 1.67    | 62            | 1.65         | 60.5          |

*Thickness of staves.*

| From—  |              | To—    |              | Invoiced as— |               |
|--------|--------------|--------|--------------|--------------|---------------|
| Meter. | Paris lines. | Meter. | Paris lines. | Meter.       | Paris inches. |
| 0.011  | 5            | 0.016  | 7            | 0.013        | 1             |
| .016   | 7            | .020   | 9            | .018         | 1½            |
| .020   | 9            | .025   | 11           | .022         | 2             |
| .025   | 11           | .032   | 14           | .027         | 1½            |
| .032   | 14           | .038   | 17           | .034         | 1½            |
| .038   | 17           | .050   | 22           | .040         | 1½            |
| .050   | 22           | .059   | 26           | .054         | 2             |

*Width of staves.*

| From—  |               | To—    |               | Invoiced as—                          |               |
|--------|---------------|--------|---------------|---------------------------------------|---------------|
| Meter. | Paris inches. | Meter. | Paris inches. | Meter.                                | Paris inches. |
| 0.081  | 3             | 0.108  | 4             | 0.081 }<br>.108 }<br>.108 }<br>.162 } | 3-4           |
| .108   | 4             | .162   | 6             |                                       | 4-6           |

When single staves exceed in size the dimensions of one class, as given in the foregoing tables, without reaching those of the next higher class, they will be treated as belonging to the lower class.

*To ascertain length of staves.*—To ascertain the length of a stave, it is measured where it is shortest; to ascertain its thickness, it is measured at the thinnest part of either of its ends; and to ascertain its width, it is measured at its narrower end. However, if staves have the prescribed minimum width at the center, they remain in the same class as regards their width even if two lines should be wanting of the minimum width of the small end.

*Floated staves.*—The purchaser can be compelled to take floated staves only if the seller has specially reserved to himself the right to furnish floated ware.

*Imperfect staves.*—Deficiently made staves may be improved by the seller only as long as they are stored on his own premises, but not after they have been turned over to the purchaser.

*Under sizes.*—When at the time of ordering select staves (monte ware), no special agreement was made that the different sizes represented in the total quantity or that the superior culls of the various sizes should not exceed a certain rate of percentage, the seller has the right to furnish the stipulated quantity in such proportions as regards sizes, or containing such a percentage of superior culls, as he may choose.

*Quantities of goods.*—If in the contract the customary word “circa” (about) is used in connection with the number expressing the quantity of goods to be furnished, or such number is expressed approximately in some other way, the seller may, according to circumstances, furnish 10 per cent less or more goods, and in such a case the purchaser has no right to claim an indemnity or to refuse to accept the surplus.

*Average width.*—When the price was agreed upon only for a certain average width, without any definite stipulation that the staves must also actually have that average width, the seller may make good any possible deficiency of width by supplying a proportionately larger number of staves, or he may compensate the buyer by a proportionate deduction from the price agreed upon. If the goods, however, have an excess of width, the purchaser is bound to agree to the payment of a proportionately higher price or be satisfied with receiving a proportionately smaller number of staves.

But if it was stipulated that the staves must have a specified average width, then the seller is bound to conform to this condition, and any possible surplus of width can not entitle him in such a case to extra compensation from the purchaser.

*Deficient assortment.*—When, in consequence of deficient assortment on the part of the seller, an inferior quality amounting to not more than 5 per cent is found in a quantity of goods designated and sold as “merce in monte,” the purchaser has no right to refuse the acceptance of the goods, but he is entitled to reimbursement for the inferior staves interspersed in the lot.

*Ascertaining average width.*—After the goods have been delivered, the average width of the total quantity sold is ascertained in the following manner: Each of the two parties selects an equally large quantity of staves for measurement, and the medium resulting from such measurement must be accepted as final by both the seller and the purchaser.

*Assorting.*—The assortment must be made at the place of delivery

and at the expense of the seller unless the contract calls for "monte vergine" goods.

*Prices.*—The price of the staves is per hundred or per thousand, taking as a basis the so-called normal stave of 0.98 meter (36 inches) length, 27 millimeters (1 inch) thickness, and 108 to 162 millimeters (4 to 6 inches) width. Staves of different dimensions are reduced according to the scale given above to this unit of measure. Different prices may, however, be agreed upon for the different sizes.

Unless otherwise agreed upon, the price is understood to be for merchandise at the yard of the seller and in Austrian currency, net cash without discount.

When the "beginning of the month" has been fixed for the time of delivery, it means the period from the 1st to the 9th, inclusive. The "middle of the month" means precisely the 15th, and the "end of the month" means precisely the last day of the month. The first half of the month means from the 1st to the 15th, and the second half from the 15th to the last day.

*Transfer of sale tickets.*—A transfer of sale tickets may be made only when agreed to by both parties.

If one of the two contracting parties becomes insolvent before the time when he has agreed to fulfill his contract \* \* \* the solvent party has a right to claim the benefits enumerated below.

*Failing to deliver in specified time.*—In case the seller has agreed to furnish a certain quantity of staves within a specified time and fails to furnish them, then the purchaser may (a) refuse to accept the goods which were not furnished at the promised time, withdraw from the contract, and demand the immediate return of the money which he may have advanced \* \* \* or (b) buy, after giving notice to the seller, the undelivered goods at the current prices of the day at the latter's expense; or (c) demand an indemnity amounting to a sum equal to the difference between the value of the goods on the day fixed for delivery and the purchase price.

*Failure of purchaser to fulfill agreement.*—In case the purchaser has agreed to take a certain quantity of staves within a certain period of time, or to pay certain installments and fails to fulfill his obligations, the seller may (a) refuse to deliver the goods which were not accepted or paid for at the time agreed upon and withdraw from the contract, or (b) sell the said quantity of staves at the current rates of the day and demand the payment of the difference between the price realized and the price stipulated in the contract, or (c) retain the goods and demand an indemnity for the difference between the value of the goods on the day of delivery and the day of sale.

FREDK. W. HOSSFELD,  
Consul.

TRIESTE, November 30, 1899.

## BOHEMIA.

*Consumption.*—The approximate estimate of the value of staves annually used in Bohemia is \$500,000, of which about \$300,000 is paid for staves of pine, spruce, and beech wood and the rest for oakwood staves, in the following proportion, viz: About \$120,000 for staves for small barrels and about \$80,000 for staves for large barrels.

*Staves in demand.*—The staves in greatest demand are oak staves for the manufacture of small beer barrels holding from one-fourth to 1 hectoliter (6.604 to 26.417 gallons) and staves for the manufacture of barrels containing from 6 to 7 hectoliters (158.502 to 184.919 gallons), which are principally used by wine and alcohol dealers.

*Source of supply.*—The source of supply is principally Bohemia, because this article will stand only a small freight charge. The staves for the manufacture of beer barrels, etc., are partly imported from Slavonia, Hungary, and Galicia. It is claimed that the home product has forced down the prices of staves to such an extent that only the better qualities from the near-by and adjoining countries—as Slavonia, Hungary, and portions of Galicia—can possibly be imported here. As staves are manufactured in many various sizes, for barrels holding from one-fourth to 150 hectoliters (6.604 to 3,900 gallons), and as the quality of the same for barrels of one-fourth to 18 hectoliters (6.604 to 476 gallons) is valued according to the kind, age, and condition of the timber when cut, it is impossible to ascertain the cost of the various kinds of staves to the consumer. In addition to this, the price of each kind is regulated by the supply of and demand for staves in the market.

*Stave timber.*—The staves in order to compete in this market must be out of oak timber which has been cut in the winter season, and must be perfectly dry and without any defect. It is claimed that the staves imported from Slavonia have proven to be the best of foreign manufacture.

*Supply and demand.*—The conditions of supply and demand in Bohemia are claimed to be not favorable, the number of staves on hand being estimated at more than sufficient to supply all demands for the next two years, and especially the manufacturers and dealers in large staves are complaining because there is no demand for the same.

*American staves.*—I am informed that a trial has been made with American staves for larger barrels, but that they did not give satisfaction on account of having been manufactured out of timber which was cut when it contained the sap, resulting in the staves having cracks, which became wider as they were being worked over the fire, resulting in total loss. It is claimed that on account of this fact having been widely circulated by the dealers here, a certain prejudice exists against the use of American staves by consumers. The dealers in

staves here also claim that for the past year or two there has been an unreasonable overproduction of staves in the United States, resulting in forcing down the prices in Germany and Austria, and that the export in large staves from the United States to Europe has been so great as to cover all regular demands for the next three years.

The foregoing is the information which this consulate after many inquiries through various sources has been able to obtain. It is very difficult indeed to obtain any information here touching the condition of the supply or demand, as well as the prices paid, for any home article. Often the information, although apparently willingly furnished and by presumably respectable business men, proves to be incorrect and misleading. I would further remark that the petroleum industry here in Bohemia is very prosperous, and I am informed that oftentimes dealers are not able to supply the demand for the barrels used for petroleum. It has occurred to me that staves already cut and prepared for such barrels, of the timber used in the United States for such purposes, could be sold in this market very readily. I would suggest that dealers interested therein should give the price per barrel without iron hoops; also the weight of the same and the freight to Hamburg per 100 pounds or per 100 kilos (220 pounds).

HUGO DONZELMANN,

*Consul.*

PRAGUE, *December 9, 1899.*

#### TRIESTE.

#### IMPORTS AND EXPORTS.

The imports and exports of oak staves (but very few other staves are used here) into and from this consular district during the years 1889-1898 were as follows:

| Year.     | Imports.       | Exports.       | Year.      | Imports.       | Exports.       |
|-----------|----------------|----------------|------------|----------------|----------------|
|           | <i>Pieces.</i> | <i>Pieces.</i> |            | <i>Pieces.</i> | <i>Pieces.</i> |
| 1889..... | 13,975,301     | 12,957,263     | 1895.....  | 5,809,002      | 2,696,142      |
| 1890..... | 8,408,635      | 5,472,172      | 1896.....  | 3,542,900      | 5,208,896      |
| 1891..... | 6,087,429      | 7,339,034      | 1897.....  | 4,094,000      | 1,081,225      |
| 1892..... | 12,042,335     | 7,230,323      | 1898.....  | 6,018,000      | 3,635,822      |
| 1893..... | 5,118,000      | 7,017,572      |            |                |                |
| 1894..... | 3,442,099      | 2,512,512      | Total..... | 68,937,401     | 55,140,961     |

From this table, it appears that the average difference between imports and exports is 1,379,644 pieces per annum, representing a value of about \$140,033. As no staves whatever are produced within the consular district of Trieste, these figures represent approximately the number of staves consumed here.

## STAVES IN GREATEST DEMAND.

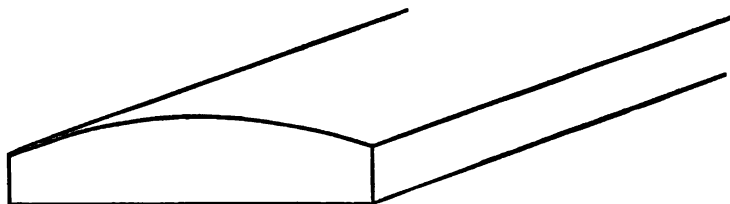
Oak staves from 36 to 48 inches long (French measure), 1 inch thick, and from 4 to 6 inches wide, and practically without flaws, are those in greatest demand

## SOURCES OF STAVE SUPPLY.

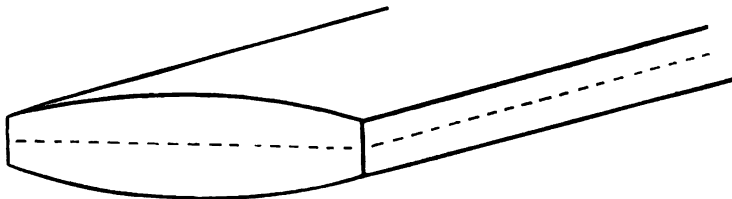
The sources of supply are Bosnia, Croatia, Slavonia, and Hungary. The price of staves is about \$93.38 per 1,000 pieces in these provinces, or from \$100.50 to \$104.52 at Trieste, the dimensions of the standard stave being 36 inches by 1 inch by 4 to 6 inches. The cubic contents of all pieces having larger or smaller dimensions are always reduced to this unit of measure.

## DIMENSIONS.

*Transportation casks.*—Staves 42 inches or more in length are employed exclusively in the manufacture of transport casks. It is desirable to have them from 4 to 6 inches wide,  $1\frac{1}{4}$  inches thick in the middle, and 1 inch at each end (or thinnest part); but a thickness of from 7 to 9 lines ( $\frac{1}{12}$  to  $\frac{1}{8}$  inch) and a width of from 3 to 4 inches makes them merchantable. However, a discount of  $33\frac{1}{3}$  per cent from the unit price is made for all staves of less than standard thickness. The shape of the stave for transport casks must be plano-convex, as shown by the following illustration:



*Bordelaises.*—Staves 36 inches long and convexo-convex in shape are called "Bordelaises." As a rule, these are about  $1\frac{1}{2}$  inches thick through the center and 1 inch at each end. In width they do not differ from the aforementioned variety. They are usually halved by the cooper. The following is an illustration of the "Bordelaise" stave:



*Heads or bottoms.*—Pieces 18, 24, or 30 inches long are exclusively used for heads and bottoms, and should be flat on both sides. As

regards width and thickness they are subject to the same rules as the other varieties.

*General dimensions.*—As has already been indicated, in giving the dimensions of staves the old French measure is still employed. A French foot is equal to 12.1386 American inches. All staves must be cut 18, 24, 30, 36, 42, 48, or 54 inches long, and, as shown in the preceding paragraph, the length of each should determine its particular shape. To pass as select, if they have all other requisites, they must be from 4 to 6 inches wide and at least 36 inches long. Staves only 30 inches long are discounted 5 per cent, and those 24 and 18 inches long are discounted 10 and 20 per cent, respectively.

#### BEST TIMBER FOR STAVES.

The best staves are made of two kinds of oak—*Quercus robur* and *Quercus pedunculata*. The former grows on the mountains of Bosnia and the latter in the lowlands of Hungary, Croatia, and Slavonia.

#### SUPPLY AND DEMAND.

Up to the present time, the home supply has greatly exceeded the demand. It is stated, however, that within a few years Austria-Hungary will cease to export staves, as the supply of white oak (*Quercus robur*) in Bosnia, which furnishes by far the largest portion of staves, is nearly exhausted.

#### AMERICAN STAVES.

During the last two years, small quantities of oak staves have been imported from the United States, viz, 94,420 pieces in 1897 and 197,465 pieces in 1898. It seems that these importations have been made to supply the want of wide staves, which has made itself felt here in recent years. I believe that for several years to come, only such American oak staves as are from 36 to 38 inches long and from 4 to 6 inches wide can find a profitable market here.

FREDK. W. HOSSFELD,

*Consul.*

TRIESTE, October 23, 1899.

#### BELGIUM.

##### ANTWERP.

There is a single manufacturer in Antwerp who imports staves in from 5,000 to 6,000 lots, amounting annually to from 100,000 to 150,000, including staves used in the manufacture of beer barrels. A very large number of staves for petroleum barrels is also used.

Statistics of stave imports are not kept by the Belgian customs, staves being entered as wood, according to the class of wood of which they are composed.

The kinds of staves employed are pipe, hogshead, and barrel, "extra heavy" and "heavy," and staves for petroleum.

The staves are imported from the United States and cost as follows, according to thickness and quality, per 1,200 pieces: Pipe, \$150 to \$200; hogshead, \$100 to \$140; barrel, \$60 to \$80.

Staves to meet the requirements of the market should be made of sound and dry white oak.

The sizes of staves vary according to the uses to which they are put, and are classed as follows: Pipe, 60 to 54 inches; hogshead, 44 inches; barrel, 35 inches.

The manufacturer referred to above, J. Persenaire, Rue des Souris, No. 2, Antwerp, to whose courtesy I am indebted for the information contained in this report, imports direct from the United States in such quantities as the market calls for.

GEO. F. LINCOLN, *Consul*.

ANTWERP, *October 25, 1899.*

#### BRUSSELS.

*Imports.*—The customs administration at Brussels does not keep a separate record of staves imported, but classes such importation under the head of "Wood of oak and walnut," tariffed at 1 franc (19.3 cents) per cubic meter (35.316 cubic feet). Duty on barrels and shooks, 10 per cent ad valorem.

*Importation of barrels and shooks into Belgium during the first nine months of 1897, 1898, and 1899 compared.*

| Whence imported.      | 1897.     | 1898.     | 1899.     |
|-----------------------|-----------|-----------|-----------|
| England .....         | \$27.79   | \$332.34  | \$55.00   |
| France .....          | 5,800.42  | 11,240.51 | 12,484.40 |
| Germany .....         | 3,332.08  | 3,528.43  | 7,801.83  |
| Holland .....         | 9,685.90  | 26,908.45 | 11,944.77 |
| Russia .....          |           |           | 2.22      |
| United States .....   | 2,098.30  | 7,484.54  | 3,305.51  |
| Other countries ..... | 818.20    | 937.98    | 330.61    |
| Total .....           | 21,600.60 | 50,432.25 | 35,024.44 |

*Cooperages.*—The two principal cooperage establishments in this city are M. Krämer, 518 Rue des Palais, Laeken, and Celestin Pierre, 62 Rue Hegvaert.

*Staves used.*—Mr. Krämer informs me that he uses only American white-oak staves in the manufacture of barrels, kegs, and hogsheads, and that he annually imports from the United States about 1,500,000 in the rough, representing a value of \$135,100, but that the demands of his business greatly exceed this amount. All sorts of staves are employed here, but those of white oak are preferred, and are invariably used in the manufacture of casks for beer, while beech wood is employed for casks for zinc, paint, etc., and pine, from Hungary and Sweden,

for cement and fruit barrels. Staves are procured direct and indirect at varying prices, according to kind and country of origin.

*Dimensions.*—Dimensions vary from 14 inches to 9 feet in length, not less than 3 inches in width and 2 inches in thickness.

*Source of supply.*—Excepting the importations from the United States, Hungary, and a small quantity from Sweden, most of the staves used in this consular district come from the Ardennes, Belgium.

Barrels and shooks are imported into Belgium from England, France, Germany, Holland, Russia, and the United States. Mr. Krämer is the only importer of American staves in this consular district. All staves bought by him from the United States are paid for against bill of lading.

*Condition in which staves should be delivered.*—It is absolutely necessary that staves destined for this market should be of white oak, smooth, and free from all defects, especially such as knots, knot and worm holes, and cut so as to incur as little waste as possible.

GEO. W. ROOSEVELT, *Consul.*

BRUSSELS, October 24, 1899.

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#### GHEENT.

*Cooperages.*—At Ghent, the chief city and trade center of two provinces, there are numerous small cooper shops scattered about the city, engaged principally in repair work and making tubs out of old liquor barrels. Occasionally they receive an order from a brewer or distiller for new barrels. An order for 10 at one time is considered to be large, but such are few and far between. The barrels of the many breweries and distilleries in the district generally find their way back.

*Source of supply.*—There are no stave yards in the city. Coopers when in need of material make their purchases direct or through lumber dealers from Antwerp, which is the stave market of Belgium. Beer vats are made at Antwerp; they are also imported from France. This condition prevails throughout the two Flanders.

The staves in greatest demand for beer and whisky barrels are white oak.

Staves come from the oak forests at Ciney near Liege, and Lessines near Ath, Belgium.

*Dimensions.*—Belgian white-oak staves 2 feet 5 inches in length, 1 inch thick, and 2 to 5 inches in width, cost, delivered free at Antwerp, \$14.48 per 68 feet 10 inches; 2 feet in length, 1 inch thick, and 2 to 5 inches in width, \$14.48 per 102 feet 4 inches, linear cross measurement. This measure is taken thus: The staves are laid on the

floor one alongside of the other, the tape line is run across in the center.

All staves received here come loose, to which there is no objection.

The following are the dimensions of staves generally in use:

| Description.                  | Length.        | Thickness.     | Width.         |
|-------------------------------|----------------|----------------|----------------|
|                               | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| Beer and whisky barrels ..... | 20             | 1              | 2 to 5         |
| Beer barrels, half .....      | 24             | 1              | 2 to 5         |
| Whisky barrels, kegs .....    | 17½            | ½              | 1 to 4         |

*Kinds of wood desired.*—For liquor barrels, they use none but the Belgian white oak. On inquiry I can not find that the American white oak has ever been used. The American red oak has been used, as well as the Russian red oak, but neither gave satisfaction. It is said the wood is too soft and porous. The Belgian white oak has a very close fiber and is much heavier in weight than the red oak.

There is considerable white oak in the neighborhood of Ciney; not much at Lessines, Belgium. The demand is very light.

*American staves.*—No American staves are sold at present in this district.

RICHARD LE BERT,  
Consul.

GHENT, October 30, 1899.

#### LIEGE.

Consul Winslow reports, November 22, 1899, that hard-wood staves come principally from Germany and soft-wood staves from Norway and Sweden. None are imported from the United States. There is but one cooper shop in Liege, a city of 300,000 population.

Casks are very little used except by the brewers and distillers, who do their own work, and it is so well done that the casks last for many years.

#### DENMARK.

*Imports.*—The annual imports of oak staves for the last five years have averaged 1,700,000, valued at \$85,760; but the import is now steadily and rapidly increasing.

There was also in 1898 a special import of 250,000 pieces circle-sawn, 35-inch petroleum staves, valued at \$6,030.

The staves are mostly imported from Hungary, Russia, Sweden, and the United States.

*Prices.*—The price averages 80.4 cents per cubic foot, cost, freight, and insurance at Copenhagen.

*Condition.*—The staves must be as dry as possible and the wood of prime quality.

A special condition for commanding the best price and giving full satisfaction is to have the wood cut in winter. The wood cut from the beginning of the spring to the beginning of the fall has all the sap in it and will always be of bad quality, and can not be sold in this market.

*Dimensions.*—The dimensions used are as follows:

| Length.        | Thickness.     | Width.         | Length.               | Thickness.     | Width.         |
|----------------|----------------|----------------|-----------------------|----------------|----------------|
| <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i>        | <i>Inches.</i> | <i>Inches.</i> |
| 84.....        | 3              | 6½             | 36 to 38.....         | 1½ to 2½       | 4½ to 5        |
| 72.....        | 3              | 6½             | 34 <sup>1</sup> ..... | 1½ to 1        |                |
| 66.....        | 3              | 6½             | 30 to 32.....         | 1½ to 1½       | 3 to 4         |
| 60.....        | 2½ to 3        | 6              | 24 to 26.....         | 1½ to 1½       | 3 to 4         |
| 54.....        | 2½ to 3        | 5½             | 22.....               | 1½ to 1½       | 2½ to 3½       |
| 48.....        | 2, 2½ to 3     | 5½             | 20 to 21.....         | 1½ to 1½       | 2½ to 3½       |
| 42 to 46.....  | 1½ to 2½       | 4 to 5         | 16.....               | 1½ to 1½       | 2½ to 3½       |

<sup>1</sup> Circle-sawn petroleum staves.

The dimensions mostly used are 7 and 6 feet, 30 to 32, 24 to 26, 22, 20 to 21, and 16 inches.

*Kind of wood.*—The wood must be white oak. Red oak is not at all suitable for this market, and the experiments which have been made with the latter have proved disastrous.

*Supply and demand.*—The demand is much larger than the supply. Manufacturers and exporters should correspond with L. Jacobsen, Wildersplads, Copenhagen.

The commercial agency of P. V. Fournais & Co., 16 gl Tow, Copenhagen, can, for a small fee, rate any firm in Denmark.

*American staves.*—The imports from the United States are increasing. Before 1897 these imports were unimportant, but in 1897 they were valued at \$17,956, in 1898 at \$25,924, and in 1899 (first nine months) at \$39,932.

*Terms of payment.*—Buyers here like to inspect the goods before paying for them, but cash payment against documents upon arrival of the goods can no doubt be enforced.

JULES BLOM,  
Vice-Consul.

COPENHAGEN, October 25, 1899.

### WHITE-OAK STAVES IN DENMARK.

[From a report by Consul Blom, printed in Consular Reports for April, 1899.]

Having heard, some three years ago, that the supplies of oak staves from Hungary, Russia, and Sweden were not equal to the demand, I called Danish importers' attention to American staves, and I have to report that the trade in our white-oak staves is quite considerable, large quantities having been landed here lately, especially from New Orleans.

Copenhagen, with its excellent free port, is a good distributing point for Norway, Sweden, and the Baltic.

Offers should be made c. i. f. Copenhagen, draft in dollars or pounds sterling, at thirty days' sight on Copenhagen. Manufacturers should correspond with L. Jacobsen, Wildersplads, Copenhagen.

## FRANCE.

### BORDEAUX.

*Imports.*—According to statistics kindly given me by the inspector of customs, the imports of staves at Bordeaux during the first six months of 1899 amounted to 34,692 tons of 2,204 pounds, of which 555 tons were American staves, the remainder being imported from Austria. No domestic staves are used and no other country furnishes any amount worth considering.

I can not make any reliable estimate of number or value, as there are great variations in the weights and prices. Consequently such an estimate would be only a guess and of no value.

*Staves in greatest demand.*—Those used for making wine “barriques.” The standard Bordeaux “barrique” holds 225 liters. A liter contains 1.7 pints; thus a barrel would hold about 50 gallons. The length of the stave used for this “barrique” is 1 meter (39.37 inches).

*Source of supply.*—All are from Austria or the United States. Austrian staves generally cost the consumer about 150 francs per grand-millier (\$28.95 per 1,616) more than the American. Just at present they are bringing the same price, 1,050 francs per grandmillier (\$202.65 per 1,616).

*Condition in which staves should be delivered.*—All the staves sold in this market are imported in bolts thick enough to make two staves when split by a band saw; smooth on both sides and squared at the edges. Whether this is the best form or not I can not say; it is the only form found in the yards. It is called a “douve;” 1,616 of them make a “grandmillier,” or, when split, 3,232 staves.

*Dimensions.*—The bolts above described are 1 meter (39.37 inches) in length, 30 to 35 millimeters ( $1\frac{1}{8}$  to  $1\frac{1}{4}$  inches) thick. They are called “douves.” They are split into two stave bolts by a band saw of very small kerf. They are from 13 to 14 centimeters wide (5 to  $5\frac{1}{2}$  inches).

*Kind of timber.*—The only timber used is oak. The Austrian staves are made of *Quercus pedunculata*. The American is said to be the *Quercus alba*; but I have found other oaks, I should say black oak or red oak, among those I examined. I am not at all certain that the Spanish oak of the Southern States would not be as desirable, if put up in good shape.

*Supply and demand.*—There is in this district a great and continuing demand. The “supply” seems equal to it.

*American staves.*—As above stated, the present sale is about 1,225 tons a year. In 1897 and 1898 it was more than four times as much. From 1794 until 1862 practically all the staves used here were imported from the United States. The civil war cut off the American supply, and the Austrian product came in to take its place. It is now greatly preferred to the American article. From such information as I can gather from the records of this consulate, I judge there were more American stave bolts brought here a hundred years ago than now.

#### GENERAL INFORMATION.

The Austrian product is said to be preferred to the American product for the following reasons: (a) It is claimed to be less porous. I doubt the correctness of this objection, because the American article is much heavier than the Austrian of the same dimensions; (b) because the Austrian is much softer, of more even grain, and more easily worked; (c) because it is free from wormholes, black checks, and crooked grain; (d) because the Austrian article is prepared with more care, better assorted, and of more uniform and reliable quality; (e) because, as is claimed, the Austrian article is more durable in a cask. This is a statement which may be taken with considerable doubt.

Some personal views suggested by careful consideration of this subject will be found in my annual report lately furnished.<sup>1</sup>

Two things should be kept always in mind in preparing stave bolts for this market.

*The douve.*—The ordinary rived, rough stave bolt of the United States can not be sold here at enough to pay the cost of transport. The “douve” is essential to profit. The “douve” is a half-finished double stave bolt, or a block of oak, 1 metre (39.37 inches) in length, from 30 to 35 millimeters ( $1\frac{1}{8}$  to  $1\frac{1}{4}$  inches) thick, and from 13 to 14 centimeters (5 to  $5\frac{1}{4}$  inches) wide. These must be squared and smoothed both on the sides and edges, so that the width and thickness are nearly uniform. These blocks are split here by a bandsaw into two stave bolts of one-half to five-eighths of an inch thickness. If the thickness is not uniform, one stave is lost in this splitting.

*The grandmillier.*—The grandmillier, or big thousand, is a peculiar measure, like the English long ton, by which staves are sold in this market. They are always imported by weight, however (100 kilograms = 220.46 pounds), and so reported by the customs officials. The American douves are much heavier than the Austrian. To ascertain the probable weight, I had 20 average American douves weighed and as many Austrian. The American weighed 86 kilos (190 pounds); the Austrian, 66 (146 pounds). This makes the average weight of the

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<sup>1</sup> Printed immediately following this report.

American douve about  $9\frac{1}{2}$  pounds. The grandmillier consists of 1,616 douves, equal to 3,232 staves. A grandmillier of American staves will therefore weigh in fairly well-seasoned condition from 14,000 to 15,000 pounds.

*Tariff.*—The tariff on American douves is 0.75 francs per 100 kilos (14.48 cents per 220.46 pounds), amounting on a grandmillier to 52.50 francs, or \$10.13 per 3,232 staves. This will vary of course with the condition of the douves, but it can be taken as a fact that it will not be less. If they are exported by a vessel which calls at a port of any other country before reaching here—as via Liverpool or Southampton—there will be, in addition, a surtax of 3.60 francs per 100 kilos, or \$4.85 per grandmillier, added, making the tariff \$14.98. No one will, of course, ship in this manner unless he gets a cut on freight equaling the surtax.

#### LOSS OF AMERICAN TRADE.

In conclusion, permit me to say that I am of opinion that the recent loss of three-fourths of our American stave trade in this market is chiefly due to three causes:

- (1) A lack of knowledge of the requirements of the market on the part of American producers, or neglect of such requirements.
- (2) A lack of care in preparing and assorting.
- (3) A lack of proper representation here.

ALBION W. TOURGÉE,  
*Consul.*

BORDEAUX, *November 27, 1899.*

#### STAVES IN BORDEAUX.

[Extract from Consul Tourgée's report printed in *Commercial Relations for 1899.*]

For a hundred years, stave bolts have been one of the chief exports from the United States to Bordeaux. The immense consumption of barrels in the wine trade makes staves one of the most important articles of merchandise in this region. The average product of wine in the department of Gironde alone, in which Bordeaux is situated, is estimated at about 2,000,000 hectoliters annually, which would require about 900,000 barriques (hogsheads) for its storage. As this wine is supposed to remain in casks for at least three years, it is evident that the handling of the wine of one department alone must require 2,500,000 barriques. Of course, the utmost economy is used and every possible device employed to prevent the decay of casks and reduce the number of new ones necessary for storing each succeeding vintage. Despite this care, however, the number of new barrels required each year is simply enormous. All the material for these is

imported. Comparison with our figures is very difficult, as the French stave statistics are kept by weight and ours by the thousand. During the first six months of 1899 there were imported into Bordeaux from Austria 68,500,000 pounds, or about 35,000 tons, of staves, and from the United States 777,000 pounds, or about 400 tons. Those imported from Austria are partly finished; that is, the bolts, after having been rived, are worked down to a uniform thickness. I should say, from inspection, they had been trimmed with a saw and then run through a planer. I may be mistaken as to the way it is done; perhaps a single machine does it all. I did not find, however, any evidence of a rotary clipper being used to secure uniform thickness. Those imported from the United States are now mostly in the same form, being prepared under direction of importers here. They were until recently merely rived. These blocks are not properly stave bolts, but about 2 inches thick, and are, after arrival here, split in twain by a band saw, making two staves from each bolt.

The great disparity between the amounts imported from Austria and the United States (no other country furnishing enough to be worth considering) is especially noticeable because of three things:

(1) The trade has been a continuous one for more than a century between all our Atlantic ports and Bordeaux.

(2) It has fallen off very rapidly during the past two years. In the first half of 1897 it was 4,889,810 pounds; during a like period in 1898 it was 4,906,220 pounds, and in 1899, only 777,979 pounds.

(3) During this period, the importation of the Austrian product has steadily increased. Yet it is generally understood that the exhaustion of the Austrian forests, both by excessive cuttings and extensive fires, has greatly reduced their productive capacity.

When I asked the reason of this from dealers here, they said, with a shrug, that the Austrian timber is much superior to the American article, because it is less porous. Of course this does not increase the capacity of the Austrian forests. I am informed, however, that many American staves are sold mixed with the Austrian product. I am also informed that in order to promote this trade, the Austrian being much the higher priced, certain parties in the United States are now employing Austrian workmen and getting out staves in the same manner as they are prepared for the Austrian market. It is evident, however, that with the present figures of comparative imports, 35,000 tons a year of the Austrian article and only 400 tons a year of the American product, there can not be any considerable admixture of this sort.

It has occurred to me that the difference in price between Austrian and American staves may be a sufficient inducement to lead the American producer to export only "Austrian" staves. Of course, this can not be done directly. "Austrian" staves would hardly pass the French customs officials in a cargo coming from New York, Boston,

Bangor, Baltimore, or New Orleans. The question is whether it does not pay to ship American staves to some Austrian port or a free port like Hamburg, and reship them here as "Austrian." I have no evidence that such a thing is done, but see no reason why it should not be done. Such a traffic would account for two curious facts—the increase of the Austrian product when it was expected to decline and the decrease of the American product without any visible reason.

## COGNAC.

The whole number of staves used yearly in Cognac and neighborhood is about 5,000,000, of all sizes, and worth about \$386,000. The kinds most in use are those employed in making barrels.

*For the export trade.*

| Receptacles.        | Length.        | Price per 100 pieces. |
|---------------------|----------------|-----------------------|
|                     | <i>Inches.</i> |                       |
| Puncheons .....     | 53.54 to 57.09 | \$22.20               |
| Hogaheads .....     | 40.55 to 43.31 | 9.30                  |
| Quarter casks ..... | 34.65 to 37.43 | \$5.79 to 6.76        |
| Octaves .....       | 29.52 to 31.50 | 3.96                  |

*For the home market.*

|  | Length.        | Price per 100 pieces. |
|--|----------------|-----------------------|
|  | <i>Inches.</i> |                       |
| Receptacles holding 26.42 to 33.02 gallons ..... | 31.50 to 34.65 | \$4.83 to \$5.79      |
| Receptacles holding 13.21 to 18.50 gallons ..... | 23.41 to 27.56 | 2.90                  |

The foregoing are prices paid to the timber dealers by the barrel makers. Many of these staves come from Austria, but the greater part from central France. They are imported through Bordeaux, Cette, and Marseilles. The seller generally follows the buyer's instruction in making staves of the desired size.

American staves are not used in Cognac. It is said that some years ago a trial of American oak was made, but was not successful on account of the bad taste taken by the Cognac brandy placed therein.

ELISEE JOUARD,

*Consular Agent.*

COGNAC, February 1, 1900.

Consul Tourgée, of Bordeaux, in transmitting the foregoing report, says:

Mr. Jouard, who has had a large experience in the brandy business, thinks it worth while to give American woods a good trial as brandy casking.

## HAVRE.

## IMPORTS.

Statistics printed by the customs authorities show that 18,093,526 pounds of staves were imported into Havre during the year 1898, almost all of which came from the United States. Estimating the average weight of a stave at 20 pounds, the figures given by the custom-house represent a total of 904,676 staves. Taking the net value of a single stave, without any charges thereon, at 16.6 cents, the importations into Havre would represent a total value of \$150,176.21.

## KIND OF STAVES IN GREATEST DEMAND.

It may be said that 80 per cent of the staves imported into Havre are the "extra pipe" staves. They are of white oak, 60 inches long, from 5 to 6 inches wide, and  $1\frac{1}{2}$  inches thick. Staves of this description are the ones most extensively used in this region, though 10 per cent of the importations are made up "extra hogshead" staves, 48 inches long, and the remaining 10 per cent of claret and barrel staves, the former 40 and the latter 32 inches long. Staves sent to Havre are sold by the "mille" (literally 1,000, but in reality 1,200). Those sent to Nantes are sold in lots of 104, and those shipped to Bordeaux in lots of 101.

## SOURCE OF SUPPLY, AND COST.

A few of the staves received at Havre come from Baltimore, but most of them are of Texas, Arkansas, or Louisiana origin, being shipped as dunnage, or as deck loads, on ships bringing cotton from New Orleans to Havre. Staves carried in this manner are taken at comparatively low rates (about \$55 per 1,200 pieces). To ship them as ordinary merchandise at the current rates of freight would make the price, with all costs and duty paid, too high for the French market.

Producers and dealers in this article in America need not be told how the price varies; and as they likewise keep posted regarding the rates of freight, it would be sufficient to tell them the French customs duty and various incidental charges, in order that by a simple calculation they might arrive at the cost to the consumer or importer at Havre. I shall, however, sum up the cost in this market of the kind of stave most commonly used.

|  |               |
|--|---------------|
| Twelve hundred extra pipe staves, value f. o. b. New Orleans ..... | \$200.00      |
| Freight on same from New Orleans to Havre .....                    | 55.00         |
| French customs duty (14.47 cents per 220 pounds) .....             | 20.84         |
| Insurance ( $1\frac{1}{2}$ per cent on \$200) .....                | 3.00          |
| Cost of unloading at Havre .....                                   | 1.16          |
| Cartage from dock to warehouse at Havre .....                      | 5.56          |
| <b>Total .....</b>   | <b>285.56</b> |

## CONDITION IN WHICH STAVES SHOULD BE DELIVERED.

Staves should be delivered in the rough, even in quality and dimensions, well seasoned, clean, dry, and free from worm holes or other defects rendering them useless. Dealers in this city state that staves coming from points north of Baltimore are liable to have numerous worm holes in them, but that the so-called New Orleans white oak staves are usually free from these and other defects.

## DIMENSIONS OF STAVES IN USE.

Finished staves of the various dimensions required for barrel making are employed in this region. But while I give these dimensions below, it is important to add that there is no market here for the finished stave. The importers at Havre desire the "extra pipe" and other staves mentioned in the second paragraph of this report, from which they can make any size stave that may be in demand.

Both small as well as finished staves have been shipped to this port by way of experiment, but the results have not been satisfactory. I therefore repeat that, whereas the dimensions in general use in this district are given below, a demand exists only for the staves already mentioned.

| Description.          | Inches.       | Description.        | Inches.       |
|-----------------------|---------------|---------------------|---------------|
| Extra heavy pipe..... | 60 x 5-6 x 1½ | Extra hogahead..... | 46 x 4-6 x 1½ |
| Extra pipe.....       | 60 x 4-5 x 1½ | Extra claret.....   | 40 x 4-6 x 1½ |
| Extra oil pipe.....   | 60 x 4 x 1    | Extra barrel.....   | 33 x 4-6 x 1½ |
| Extra pipe culls..... | 60 x 4-6 x 1½ | Extra keg.....      | 26 x 4-6 x 1½ |
| Extra pipe.....       | 56 x 4-6 x 1½ | Extra heading.....  | 20 x 4-6 x 1½ |
| Extra hogahead.....   | 48 x 4-6 x 1½ | Points verts.....   | 60 x 5 x 1½   |

## TIMBER MOST DESIRABLE.

The kind of wood most desirable for the staves coming to this port is the American white oak from the regions mentioned above.

## SUPPLY AND DEMAND.

As a rule, there is a steady demand at Havre for the heavy pipe stave, and in 1897, owing, possibly, to the war between the United States and Spain, the supply in America was insufficient to meet it. As a natural sequence, this caused a shortage in stocks on this side and an advance in prices of about 10 per cent, which at the present time is still being maintained.

Staves sent to firms in Havre should be consigned, payment to be made when the merchandise is sold. Sales are usually made quickly unless the consignee, noting an advance in prices or an upward tendency in the market, holds his stock in hand until a certain figure is reached. If the merchandise is bought for cash (which is the excep-

tion rather than the rule) a discount of  $2\frac{1}{4}$  per cent is expected by the purchaser.

#### KIND OF STAVES SOLD IN THE DISTRICT.

American staves are about the only ones which find a market in Havre; but in Bordeaux, Cette, Montpellier, Beaune, Marseilles, and other wine-making centers of the south and east of France, large numbers of Austrian staves are used.

The following tables show the total importations of oak and other staves into France during the year 1898. As regards oak staves, which represent the greater part of those imported, it will be seen that whereas considerably more than half come from Austria, more than one-quarter are received from the United States.

From these tables an estimate of the total number of staves can not be made (as for Havre alone) for the reason that the pounds can not be divided by a unit representing the weight of one stave. Some of the staves weigh 5 pounds, some 10, some 15, and so on.

#### *Importation of staves into France in 1898.*

| Whence imported.     | Oak staves.    | Other staves.  |
|----------------------|----------------|----------------|
|                      | <i>Pounds.</i> | <i>Pounds.</i> |
| Russia.....          | 13,394,898     |                |
| Germany.....         | 1,486,909      | 24,156         |
| Belgium.....         | 520,787        | 234,889        |
| Switzerland.....     | 541,388        |                |
| Austria.....         | 167,975,724    | 2,747,602      |
| Italy.....           | 3,171,054      |                |
| Roumania.....        | 882,744        |                |
| United States.....   | 62,048,690     |                |
| Other countries..... | 242,215        | 4,305          |
| Total.....           | 250,214,899    | 3,010,952      |

#### DUTY ON STAVES ENTERING FRANCE.

By the terms of a reciprocal agreement which went into effect on June 1, 1899, the customs duty on American staves entering France was placed at 14.47 cents per 220 pounds.

A. M. THACKARA,  
Consul.

HAVRE, November 10, 1899.

#### LA ROCHELLE.

#### BEST WOODS FOR STAVES.

The wood considered best for making brandy casks is that from the region of Limoges, but owing to its scarcity the price is very high, and consequently only small quantities are employed. Taken all in all, the makers prefer the oak from Bosnia or Austria, that from the

latter-named country being the more advantageous. This is sold in varying dimensions by the "quart" or "quart foncé." A "quart" or quarter consists of 404 staves. A "quart foncé" consists of 303 staves and 202 pieces for heads or ends. The heads are often sold separately in quarters, each consisting of 808 pieces.

American oak is principally employed in making hogsheads for alcohol and smaller barrels serving as receptacles for the transport of wines. It is claimed that a disagreeable color and an acrid taste is imparted to brandy placed in American wood, which renders its use by distillers difficult. The prices are cheaper than those already given and large quantities are employed by winehouses.

Austrian oak employed here during a year is about as follows:

For casks of 180 to 200 liters (47.8 to 52.8 gallons):

|             |        |
|-------------|--------|
| Staves..... | 29,000 |
| Ends.....   | 10,000 |

For casks of 110 to 160 liters (29 to 42.2 gallons):

|             |        |
|-------------|--------|
| Staves..... | 19,000 |
| Ends.....   | 5,000  |

For casks of 225 to 235 liters (59.44 to 62 gallons):

|             |        |
|-------------|--------|
| Staves..... | 5,400  |
| Ends.....   | 11,000 |

#### DIMENSIONS AND PRICES.

The prices vary according to the dimension and quality of the wood. The usual dimensions and prices are:

|  | Length.        | Width.         | Thickness.     | Price per<br>quarter. |
|--|----------------|----------------|----------------|-----------------------|
|  | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |                       |
| Casks holding—                                       |                |                |                |                       |
| 29 to 39.6 gallons.....                              | 31.5 to 35.4   | 3.9 to 4.26    | 1.2 to 1.6     | \$21.28 to \$22.20    |
| 47.55 to 52.85 gallons.....                          | 35.4 to 39.37  | 3.9 to 4.26    | 1.2 to 1.6     | 23.16 to 24.20        |
| 59.44 to 65.85 gallons.....                          | 39.37 to 44.31 | 3.9 to 5.9     | 1.6 to 1.97    | 36.60 to 44.39        |
| Ends of casks holding 47.55 to 52.85<br>gallons..... |                |                |                | 24.18 to 38.60        |
| Other.....   | 21.65 to 25.60 | 4.26 to 5.9    | 1.6 to 1.97    | 38.60                 |

GEO. H. JACKSON,  
Consul.

LA ROCHELLE, February 6, 1900.

#### MARSEILLES AND CETTE.

#### IMPORTS.

The stave trade of southern France is concentrated at Marseilles and Cette, the latter being the center of an important wine district located a few miles west of this city. The entire stock of staves for wine casks is imported, the principal source of supply being the

northern Adriatic ports. The total importations at Marseilles are officially reported as follows (quantities in metric tons of 2,204.6 pounds):

| Kinds and whence.       | 1897.  | 1898.  | First half 1899. |
|-------------------------|--------|--------|------------------|
| <b>Oak staves:</b>      |        |        |                  |
| United States .....     | 3,280  | 3,477  | 3,607            |
| Other countries .....   | 12,624 | 9,128  | 2,621            |
| Total .....             | 15,904 | 12,605 | 6,228            |
| <b>Staves, not oak:</b> |        |        |                  |
| United States .....     | 540    | —      | —                |
| Other countries .....   | 784    | 211    | 126              |
| Total .....             | 1,324  | 211    | 126              |

I am advised at Cette that of the 30,000,000 staves received last year from Austria-Hungary at all French ports, one-half were imported at Cette. At the same time, 15,000,000 staves were also imported at Cette from all other countries, from Russia and Italy principally. Reduced to exact figures, the total imports of staves at Cette during the first half of 1899 amounted to 28,219 tons, of which 4,076 tons came from the United States.

These figures show the growing importance of the United States as a source of supply, and especially the growing importance of Marseilles as the distributing center of American importations. For the first half of 1899, the stock received from the United States at Marseilles was within 469 tons of the American stock received at Cette. One of the controlling reasons for this circumstance is the advantageous freight rates which may be obtained between American ports and Marseilles, the staves being classified as "dunnage" and shipped in connection with cotton oil and other heavy articles. In this way, a rate ranging from \$20 to \$30 per 1,200 pieces may be obtained at New Orleans, and the staves when received can often be transshipped to Cette, Spain, and other places for less than the rate on direct exportations. This consideration has become so apparent that one importer in this city has launched out in the cotton-oil trade for the express purpose of being enabled to contract for the transportation of staves as dunnage. By working the two lines together, he is able to charter ships at very low rates.

#### SOURCES OF SUPPLY.

The statistics above quoted hardly bear out the assertion that the Austrian forests are exhausted. The sources of supply are gradually becoming more distant from the seaports, it is true, but this is in a measure counterbalanced by means of transportation that have been multiplied in recent years. Nevertheless, it has become clear that the Austrian forests will not be permanently equal to the demand upon them for first-class oak staves, and no European substitute for this wood has yet been found. The Austrian trees now being cut are less

perfect than formerly, and the proportion of perfect staves and culls is becoming greater in favor of the culls. It therefore follows that the relatively unimportant part played by the United States in this business can be rapidly enlarged, especially if our manufacturers will consult the peculiar wants of the market.

#### STAVES MOST IN DEMAND.

The stave lengths most in demand are known under the designations "N. O. West India hogsheads" and "Heavy hogsheads." "Heading" is not much sought, the local preference being to make the cask heads of oak of other countries. The pieces should run from 44 to 46 inches in length for hogsheads, and heading should be 34 inches long. "Claret" staves are scarcely used in this market. These are staves 39.37 inches in length, and are employed for casks containing from 120 to 125 liters (31.70 to 38.02 gallons), known in France as "Bordelaises." In any case, not more than 5 per cent of the quantity of "hogsheads" should be sent in "clarets," and then only for stowage purposes. All staves should be knife worked, following the grain, and not sawed; that is, they should have parallel faces and edges at right angles to each other. Rough and conical staves are not desired. The wood should be dry, as the tariff is \$1.44 per ton of 1,000 kilograms (2,204 pounds), and every pound of moisture adds to the landing expenses.

White oak is sought most generally, although there is an Italian red oak called "cerro" that is largely used for alcohol casks.

#### PRICES.

Prices range from \$120 to \$130 per 1,200 staves for "heavy hogsheads" and \$105 to \$110 for "prime lights." The "culls" bring about \$90 when they are not green. "Prime heading" of 1½ to 1¾ inches commands \$90. All prices are c. i. f.

The wood arrives by sailing ships and steamers, the American ports of departure represented being New Orleans, Pensacola, Mobile, Newport News, and New York.

#### AMERICAN STAVES IN CETTE.

My correspondent at Cette writes:

The sale of American staves has slackened because of recent high prices lately asked by some exporters, and because of the opposition to American staves on the part of the workingmen, who object to their hardness. The coopers prefer to work Austrian or Russian staves, even though given higher wages for working American oak, pretending that the fatigue in the former case is very much less. It must always be borne in mind that here, all work is done by hand and none by machine.

Recent arrivals have been very light, and for six months the general demand has not been active. The manufacturers require fewer staves than formerly, and the stock is sufficient. Several cargoes are expected about the end of the year.

To increase the demand for American staves, the exporters must pay greater attention to choice pieces, imitating the forms sent from Austria and Russia. Certain American houses have already done as much, and their mark is preferred to many others. But in any case, the local trade can not be much extended until the prices are returned to the point where they were several years ago. We believe present firmness is due to scarcity of stock in America, owing to the late war, and we anticipate an important increase in production, followed by weakening prices. Thereupon transactions will increase. In a word, Cette offers a good market for the sale of American staves, if the producers will conform to local needs and submit attractive prices.

I hold myself in readiness to meet any specific inquiry to put American manufacturers in touch with buyers here or in Cette, or in any other manner to aid in extending the business.

ROBERT P. SKINNER,  
Consul.

MARSEILLES, October 20, 1899.

#### NICE.

#### STAVES MOST IN DEMAND.

Hard chestnut-wood staves are used for the manufacture of casks to contain oil; they come from the south of Italy, as other chestnut wood obtainable is often too porous.

Oak-wood staves are used for making wine casks; but the market for this kind of stave is very insignificant, as the quantity of wine made is small, and is for home consumption.

#### DIMENSIONS AND PRICES.

The sizes of hard chestnut staves are, from information given, as follows:

| Length. |         | Width. |         | Thickness. |         |
|---------|---------|--------|---------|------------|---------|
| Meters. | Inches. | Meter. | Inches. | Meter.     | Inches. |
| 1.50    | 59.06   | 0.15   | 5.905   | 0.08       | 1.1811  |
| 1.40    | 55.118  | .14    | 5.5155  | .08        | 1.1811  |
| 1.35    | 53.1495 | .13    | 5.1181  | .08        | 1.1811  |
| 1.15    | 45.2755 | .11    | 4.8907  | .08        | 1.1811  |
| 1.05    | 41.3385 | .10    | 3.937   | .08        | 1.1811  |
| .95     | 37.4015 | .10    | 3.937   | .024       | .9825   |

The prices, according to length, are as follows, per 100:

|                    | France. | United States equivalent. |
|--------------------|---------|---------------------------|
| 59.45 inches.....  | 40      | \$7.73                    |
| 55.122 inches..... | 35      | 6.76                      |
| 53.15 inches.....  | 23      | 4.25                      |
| 45.27 inches.....  | 15      | 2.91                      |
| 41.34 inches.....  | 11      | 2.13                      |
| 37.40 inches.....  | 5       | .97                       |

Italian staves are brought in packages of 12 staves.

## AMERICAN STAVES.

No American staves are sold at present in my district, but there is no objection to American goods. They will be willingly purchased if prices and qualities suit the buyers.

Mr. F. Navello, Nice, is the only important cask manufacturer in my district. He uses over \$20,000 worth of staves per year.

HAROLD S. VANBUREN,

*Consul.*

NICE, *November 14, 1899.*

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## PARIS.

I have to state, in reply to Department circular requesting information as to the stave industry in my consular district, that it is impossible to obtain any reliable details on this subject in my immediate neighborhood, as the manufacture of barrels and receptacles of that nature is carried on in the wine and oil districts of France, the consuls of which, I notice, have made exhaustive reports on the subject.

JOHN K. GOWDY,

*Consul-General.*

PARIS, *December 20, 1899.*

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## RHEIMS.

## PRELIMINARY REMARKS.

The wine product of this consular district is over 10,000,000 gallons annually. If this production were exported in barrels, the number of these required every year would be considerable. But this is not the case. The wine is sold in quart and pint bottles.

The grape vintage begins about the 1st of October and lasts from two to three weeks. The juice of the grapes is extracted by great presses and put in barrels made of oak. The barrels of grape juice are taken to the champagne wine manufactories and stored until the next May. The barrels are then emptied and the wine put into bottles.

The empty barrels are thoroughly cleaned and laid aside for the next season's vintage. As the life of a good oak barrel is at least twenty years, the consumption of barrels by the champagne-wine trade is not very large.

The beer trade consumes many more barrels than the wine industry, because considerable beer is sold directly from the cask; but in this country by far the greater part is sold in bottles also.

I have delayed this report, trying to ascertain the output of the small manufacturers, who furnish the staves for the barrel makers of this city, and also sell staves to other parts of France, but in every

case these manufacturers have refused to reply to letters addressed to them upon this subject. They seem to be under the impression that we are seeking to take away their business.

There is a large supply of oak yet remaining in this consular district, principally in the department of Vosges. Considering the supply of raw material, the distance from a seaport, and the limited demand, it would seem hardly worth while to try to find a market at this time for American staves in this part of France.

#### STAVES USED.

I reply to the questions asked as follows:

Very difficult to give an approximate estimate of the number of staves used and their value, but certainly not over 100,000 each year, valued at about \$4,000.

The kind of staves in demand is exclusively oak.

Almost all the staves used in Rheims and Epernay come from Florent, in the department of Marne, and the timber from the forest of St. Menoheult, near Florent. The cost to the consumer is from 3 to 4 cents apiece.

The dimensions of the staves in use are 85 centimeters (33.46 inches) long, 8 to 10 centimeters (3.15 to 3.937 inches) wide, and 2 centimeters (0.079 inch) thick.

No American staves are sold at present in this district.

WM. A. PRICKETT,

*Consul.*

RHEIMS, *January 16, 1900.*

#### GERMANY.

##### DISCRIMINATION AGAINST AMERICAN STAVES.

I note by the German Government statistics that the importations of American staves in 1896, 1897, and 1898 were as follows:

| Year.      | Tons.   | Value.      |            |
|------------|---------|-------------|------------|
|            |         | Marks.      |            |
| 1896 ..... | 9, 140  | 1, 000, 000 | \$228, 000 |
| 1897 ..... | 24, 962 | 2, 700, 000 | 640, 600   |
| 1898 ..... | 5, 962  | 600, 000    | 142, 800   |

From these figures, it will be seen that the trade in American staves is declining notably. This decrease is the direct result of the unjust discrimination in freight rates by the German authorities, by which American staves have to pay a much higher rate than staves from European countries; and this amounts to almost prohibition in dealing in American staves. There remains little doubt that on a footing of equality with Austro-Hungarian or Russian staves, as far as railroad freight charges by Germany are concerned, American

staves would supply the German market almost exclusively. The German railroads, however, make this impossible; in fact, they have almost destroyed the market in American staves.

It must be borne in mind that the German railroads are Government property. The German railroad fiscus embraces the Prussian, Saxon, Bavarian, Wurtemberg, and other railroads. The rates are regulated by the German railroad freight tariff, and this demands a higher rate for American staves than for those from Austria-Hungary or Russia, although our staves are in every respect identical with those of European origin and can not be distinguished therefrom. The value of one kind is not higher than that of the other; the same barrel is often made in part of American and part of European staves; still American staves have to pay higher freight charges than those from European countries.

Staves from other countries pay according to special railroad tariff No. 2, while American staves are charged according to special railroad tariff No. 1, and while the import duty is the same on both, and has to be, as the United States belongs to the "most favored nation" class, as well as Austria and Russia, and consequently no discrimination could be made, still through the railroad tariff, fixed by the German Government, American staves pay so much more than staves from European countries that it virtually amounts to a higher duty; at least the practical result is the same.

The duty on oak staves is 20 marks for 10,000 kilograms; that is, \$4.76 for 22,046 pounds.

A large percentage of American staves is shipped by ocean freighters to Rotterdam, and thence by vessel to Frankfort-on-the-Main. From this point the places in southern Germany are supplied, the staves being shipped by railroad.

The following is a table showing the distances in kilometers to a number of cities from Frankfort, the rates charged on American staves under special tariff No. 1, and those for non-American staves under special tariff No. 2, and the difference in charges per 100 kilograms (220.46 pounds):

|                    | Kilometers. | Special tariff 1. | Special tariff 2. | Difference. | United States equivalent. |
|--------------------|-------------|-------------------|-------------------|-------------|---------------------------|
| From Frankfort to— |             | Marks             | Marks             | Marks.      |                           |
| Mannheim .....     | 83          | 0.46              | 0.38              | 0.08        | \$0.019                   |
| Stuttgart .....    | 200         | 1.02              | .82               | .20         | .0476                     |
| Karlsruhe .....    | 131         | .71               | .58               | .13         | .031                      |
| Augsburg .....     | 363         | 1.71              | 1.36              | .35         | .083                      |
| München .....      | 408         | 1.96              | 1.53              | .41         | .096                      |
| Würzburg .....     | 132         | .71               | .58               | .13         | .031                      |
| Nuremberg .....    | 234         | 1.17              | .94               | .23         | .054                      |
| Kulmbach .....     | 265         | 1.31              | 1.05              | .26         | .062                      |
| Coburg .....       | 255         | 1.27              | 1.01              | .26         | .062                      |
| Metz .....         | 294         | 1.40              | 1.11              | .29         | .069                      |
| Strassburg .....   | 214         | 1.08              | .87               | .21         | .05                       |
| Cassel .....       | 200         | 1.02              | .82               | .20         | .0476                     |
| Hanover .....      | 351         | 1.70              | 1.35              | .35         | .083                      |
| Berlin .....       | 534         | 2.52              | 1.99              | .53         | .126                      |

If now the consumer of Munich, where vast quantities of white oak staves are used, orders a carload containing 10,000 kilograms (22,046 pounds) from Frankfort, he would have to pay 155 marks (\$36.89) if the staves are non-American and 196 marks (\$46.65) if American; a difference of 41 marks (\$9.75) on a carload of 10 metric tons.

The duty which both kinds of staves had to pay on entering Germany was 20 marks for 10 metric tons. Add now 41 marks for 10 metric tons of American staves sent from Frankfort to Munich, which other than American staves do not have to pay, and American staves virtually pay a duty of 61 marks (\$14.52), against 20 marks (\$4.76), which Austrian staves, for instance, pay.

Until this injustice is done away with, the prospects for American staves in Germany are not bright.

RICHARD GUENTHER,  
*Consul-General.*

FRANKFORT-ON-THE-MAIN, *October 25, 1899.*

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#### GERMANY.

##### SOURCES OF SUPPLY.

In former times, Germany derived its supply of oak staves from its own forests and from Austria-Hungary. Within the past thirty years the oak forests of this country have become so reduced that the supply from this source has been nearly exhausted, and such as remain are limited to small sizes for quarter and half barrel beer casks.

Austria still furnishes nearly half the entire imported stave supply, but in Austria, too, the larger oak trees have been cut away until most of the staves furnished are of the smaller sizes only.

##### IMPORTS.

These conditions were described at length in the reports published by the Department of State in 1892, at which time the American importation of oak staves into Germany had become fairly well established, the imports of 1890 being 350 tons out of a total of 7,926 tons imported during the year from all countries. How successfully the trade has been developed during the intervening period will be shown by the fact that the total import of oak staves to Germany in 1898 amounted to 73,657 tons, of which Austria-Hungary supplied 35,176 tons, Russia 5,782, and the United States 32,412 tons, or more than ninety-two times the import of American staves only eight years ago. The statistics of the first nine months of the current year show that Austria supplied to Germany during that period 22,478 tons of oak

staves, Russia 4,255, and the United States 15,974 tons, most of which were imported by cargoes in sailing vessels. But large quantities also came to Bremen and Hamburg as "dunnage," or blocking, to pack between other freight in the holds of steamers and prevent it from sliding or changing position with the rolling of the ship.

#### SIZES AND PRICES.

The conditions upon which the trade is based are very simple. In so far as the dwindling forests of Austria can supply staves of the small size required for beer cooperage, they are as good and somewhat cheaper than those from the United States when delivered at interior points in Germany. But in all the larger sizes of staves, such as are used for wine casks, the United States has become the one important source of supply.

The sizes most in demand are as follows: Length, 5, 5½, 6, 6½, 7, 7½, and 8 feet; width, 6 to 8 inches, and thickness from 2½ to 3½ inches at the ends and usually somewhat thinner at the middle. Oak headings for the same casks are from 8 to 10 inches in width and from 3 to 3½ inches in thickness.

Staves are of several sizes, from 2½ to 6 feet long, for whole, half, and quarter barrels for general traffic, and for large storage or cellar casks which contain as high as 400 gallons. The principal sizes for beer kegs are from 2½ to 4 feet long, 5 to 7 inches wide, and 2 to 2½ inches thick.

The costs of staves and headings for beer casks of various sizes are given as follows:

|                       |                  |
|-----------------------|------------------|
| 5 to 10 gallons.....  | \$1.25 to \$2.00 |
| 10 to 20 gallons..... | 2.00 to 3.50     |
| 20 to 30 gallons..... | 3.50 to 5.00     |

#### RUSSIAN STAVES IN GERMANY.

Staves of Russian origin were introduced into the German market at about the same time as those from the United States; the quantity imported from Russia is steadily increasing as the railways of that country are extended farther into the southern provinces where the principal oak forests are found. The seat of this trade is mainly at Hamburg and Dantzic, and for the information of the parties for whom this report is desired, there is inclosed as an exhibit the prospectus of a leading Hamburg dealer in Russian staves, showing the length, breadth, thickness, and price per thousand.

FRANK H. MASON,  
*Consul-General.*

BERLIN, *October 31, 1899.*

*Price list of Russian staves in Hamburg.*

[Walter Postach, Hamburg, February, 1899.]

| Length.        | Width.         | Thickness.                | Price<br>per<br>1,000. <sup>1</sup> | Weight<br>per<br>1,000. <sup>1</sup> |
|----------------|----------------|---------------------------|-------------------------------------|--------------------------------------|
| <i>Inches.</i> | <i>Inches.</i> | <i>Línes.<sup>2</sup></i> |                                     | <i>Tons.<sup>3</sup></i>             |
| 40 to 44.....  | 4 to 6         | 18 to 22                  | \$180.80                            | 2.73                                 |
|                | 4 to 6         | 16 to 18                  | 168.88                              | 2.55                                 |
|                | 4 to 6         | 14 to 16                  | 157.66                              | 2.40                                 |
|                | 4 to 6         | 12 to 14                  | 136.10                              | 2.05                                 |
|                | 4 to 6         | 9 to 12                   | 112.71                              | 1.70                                 |
|                | 4 to 6         | 7 to 9                    | 90.13                               | 1.37                                 |
|                | 4 to 6         | 5 to 7                    | 67.55                               | 1.06                                 |
|                | 3 to 4         | 18 to 22                  | 120.24                              | 3.12                                 |
|                | 3 to 4         | 16 to 18                  | 112.71                              | 2.92                                 |
|                | 3 to 4         | 14 to 16                  | 105.19                              | 2.73                                 |
|                | 3 to 4         | 12 to 14                  | 90.13                               | 2.34                                 |
|                | 3 to 4         | 9 to 12                   | 75.08                               | 1.95                                 |
|                | 3 to 4         | 7 to 9                    | 60.22                               | 1.56                                 |
|                | 3 to 4         | 5 to 7                    | 45.16                               | 1.17                                 |
| 34 to 38.....  | 4 to 6         | 18 to 22                  | 154.40                              | 2.18                                 |
|                | 4 to 6         | 16 to 18                  | 144.75                              | 2.04                                 |
|                | 4 to 6         | 14 to 16                  | 135.10                              | 1.91                                 |
|                | 4 to 6         | 12 to 14                  | 115.80                              | 1.64                                 |
|                | 4 to 6         | 9 to 12                   | 96.50                               | 1.37                                 |
|                | 4 to 6         | 7 to 9                    | 77.20                               | 1.09                                 |
|                | 4 to 6         | 5 to 7                    | 57.90                               | .82                                  |
|                | 3 to 4         | 18 to 22                  | 103.16                              | 2.34                                 |
|                | 3 to 4         | 16 to 18                  | 96.50                               | 2.19                                 |
|                | 3 to 4         | 14 to 16                  | 90.13                               | 2.05                                 |
|                | 3 to 4         | 12 to 14                  | 77.20                               | 1.75                                 |
|                | 3 to 4         | 9 to 12                   | 64.46                               | 1.46                                 |
|                | 3 to 4         | 7 to 9                    | 58.53                               | 1.17                                 |
|                | 3 to 4         | 5 to 7                    | 38.60                               | .88                                  |
| 28 to 32.....  | 4 to 6         | 18 to 22                  | 123.73                              | 3.90                                 |
|                | 4 to 6         | 16 to 18                  | 120.63                              | 3.65                                 |
|                | 4 to 6         | 14 to 16                  | 112.71                              | 3.43                                 |
|                | 4 to 6         | 12 to 14                  | 96.50                               | 2.93                                 |
|                | 4 to 6         | 9 to 12                   | 79.48                               | 2.44                                 |
|                | 4 to 6         | 7 to 9                    | 64.46                               | 1.96                                 |
|                | 4 to 6         | 5 to 7                    | 45.25                               | 1.47                                 |
|                | 3 to 4         | 18 to 22                  | 85.80                               | 2.73                                 |
|                | 3 to 4         | 16 to 18                  | 80.48                               | 2.55                                 |
|                | 3 to 4         | 14 to 16                  | 75.08                               | 2.40                                 |
|                | 3 to 4         | 12 to 14                  | 64.27                               | 2.05                                 |
|                | 3 to 4         | 9 to 12                   | 53.46                               | 1.70                                 |
|                | 3 to 4         | 7 to 9                    | 43.04                               | 1.37                                 |
|                | 3 to 4         | 5 to 7                    | 32.23                               | 1.09                                 |
| 22 to 26.....  | 4 to 6         | 18 to 22                  | 95.80                               | 3.12                                 |
|                | 4 to 6         | 16 to 18                  | 79.54                               | 2.92                                 |
|                | 4 to 6         | 14 to 16                  | 75.08                               | 2.73                                 |
|                | 4 to 6         | 12 to 14                  | 64.46                               | 2.34                                 |
|                | 4 to 6         | 9 to 12                   | 53.46                               | 1.95                                 |
|                | 4 to 6         | 7 to 9                    | 43.04                               | 1.56                                 |
|                | 4 to 6         | 5 to 7                    | 32.23                               | 1.17                                 |
|                | 3 to 4         | 18 to 22                  | 67.32                               | 2.18                                 |
|                | 3 to 4         | 16 to 18                  | 53.46                               | 2.04                                 |
|                | 3 to 4         | 14 to 16                  | 50.18                               | 1.91                                 |
|                | 3 to 4         | 12 to 14                  | 43.04                               | 1.64                                 |
|                | 3 to 4         | 9 to 12                   | 35.71                               | 1.37                                 |
|                | 3 to 4         | 7 to 9                    | 28.76                               | 1.09                                 |
|                | 3 to 4         | 5 to 7                    | 21.62                               | .82                                  |
| 16 to 22.....  | 4 to 6         | 18 to 22                  | 64.46                               | 2.34                                 |
|                | 4 to 6         | 16 to 18                  | 60.41                               | 2.19                                 |
|                | 4 to 6         | 14 to 16                  | 56.36                               | 2.05                                 |
|                | 4 to 6         | 12 to 14                  | 48.25                               | 1.75                                 |
|                | 4 to 6         | 9 to 12                   | 40.86                               | 1.46                                 |
|                | 4 to 6         | 7 to 9                    | 32.23                               | 1.17                                 |
|                | 4 to 6         | 5 to 7                    | 24.13                               | .89                                  |
|                | 3 to 4         | 18 to 22                  | 42.85                               | 1.94                                 |
|                | 3 to 4         | 16 to 18                  | 40.84                               | 1.83                                 |
|                | 3 to 4         | 14 to 16                  | 37.04                               | 1.68                                 |
|                | 3 to 4         | 12 to 14                  | 32.23                               | 1.53                                 |
|                | 3 to 4         | 9 to 12                   | 26.63                               | 1.23                                 |
|                | 3 to 4         | 7 to 9                    | 21.62                               | 1.08                                 |
|                | 3 to 4         | 5 to 7                    | 16.21                               | .82                                  |

<sup>1</sup> Values reduced to United States equivalents, and weights reduced from kilograms to metric tons in the Bureau of Foreign Commerce.

<sup>2</sup> Line = one-twelfth of 1 inch.

<sup>3</sup> Tons of 2,204.6 pounds.

## BARMEN.

## CONSUMPTION OF STAVES.

As to the number and value of staves used in my district, it will be impossible to answer by figures, as all efforts to obtain statistics through the different chambers of commerce have been in vain. I suppose, however, that an immense amount of staves is being used in my district, which has within its boundaries the largest beer-brewing cities in the province of Westphalia.

Besides the staves used in the breweries, much cooperage is required for wine, vinegar, spirits, and other fluids, and for all kinds of vessels needed in distilleries, factories, and household.

The staves mostly demanded are used in the manufacture of large beer casks, in which beer is stored for aging, and kegs used in the general beer traffic.

## SOURCES OF SUPPLY.

Most of the staves are procured from Hungary and Galicia, the leading firms furnishing the supply being the Union Bank, Leopold Kern, and Fritz Krauss, of Vienna, and Kronenberg Sons and N. Vuck Sons, of Pest.

## STAVES MOST IN DEMAND.

Staves, in order to give satisfaction and at the same time command best prices, should be split, not artificially dried, and not too narrow in size. The thickness of the staves should, regardless of size, be sufficient to allow for planing or trimming off. The trees used for making staves should be felled during the months of December, January, and February, when they have but little sap.

The kind of timber most desirable for the manufacture of staves is white oak, close grained and finely porous, which will not warp or shrink.

## DIMENSIONS.

According to official statistics, the sizes of staves and headings in greatest demand in Barmen are as follows:

[Liter=1.0567 quarts; centimeter=0.3937 inch.]

| Casks<br>hold-<br>ing— | Length.     |                | Casks<br>hold-<br>ing— | Length.     |                |
|------------------------|-------------|----------------|------------------------|-------------|----------------|
|                        | Staves.     | Head-<br>ings. |                        | Staves.     | Head-<br>ings. |
| <i>Liters.</i>         | <i>Cms.</i> | <i>Cms.</i>    | <i>Liters.</i>         | <i>Cms.</i> | <i>Cms.</i>    |
| 50                     | 191         | 152            | 88                     | 229         | 184            |
| 53                     | 195         | 155            | 90                     | 232         | 185            |
| 55                     | 197         | 157            | 95                     | 236         | 188            |
| 58                     | 201         | 159            | 100                    | 241         | 191            |
| 60                     | 204         | 161            | 105                    | 245         | 195            |
| 63                     | 206         | 164            | 110                    | 249         | 197            |
| 65                     | 209         | 166            | 115                    | 252         | 200            |
| 68                     | 212         | 168            | 120                    | 256         | 204            |
| 70                     | 214         | 170            | 125                    | 259         | 206            |
| 73                     | 216         | 171            | 130                    | 263         | 209            |
| 75                     | 218         | 173            | 135                    | 266         | 212            |
| 78                     | 220         | 175            | 140                    | 269         | 214            |
| 80                     | 223         | 177            | 145                    | 272         | 216            |
| 83                     | 225         | 179            | 150                    | 275         | 219            |
| 85                     | 227         | 182            |                        |             |                |

## AMERICAN STAVES.

No American staves are sold at present in this district, to the best of my information.

As there is very little white oak grown in Germany, I believe that American staves would find a ready market here, if delivered in the right dimensions and with prices competing with those now being paid for staves of Hungarian and Galician origin.

As far as I have been able to learn, staves are sold per "eimer" (15 gallons), freight paid, exclusive of duty.

MAX BOUCHSEIN,  
*Consul.*

BARMEN, *October 20, 1899.*

## BAVARIA.

## IMPORTS.

I find it impossible to obtain an estimate as to the number of staves used annually within my consular district.

## DIMENSIONS AND PRICES.

The smaller sizes are still supplied by Slavonia, and I am told that this will continue to be so on account of the lower wages and freight, while the larger sizes, especially those above 160 centimeters (5 feet 3 inches) in length, come chiefly from the United States.

As regards prices, I am informed that the American kind is the cheaper of the two. For example, a certain size American oak costs 80 cents and the corresponding Slavonian 88 cents.

People in the trade say that American oak must naturally be cheaper, being the harder material of the two. The working expenses for this are about 5 per cent higher.

## CONSUMERS.

The largest consumers of staves, especially of American ones, are, nowadays, the barrel factories, while coopers still prefer the Slavonian oak, even in the larger sizes, as it is easier to work.

The coopers, however, have lost much of their trade, as the breweries now buy of the factories large quantities of ready-made barrels, instead of placing orders with local coopers.

Leading barrel factories in Bavaria are as follows: Munich, Joseph Dorn, Carl Ruppauer, and Joseph Strobel; Heidingsfeld, Michael Wellhöfer.

## AUSTRIANS WORKING AMERICAN FORESTS.

The trade in American staves, I am informed, is practically monopolized by the following firms: Fritz Krauss, the Union Bank, and Leopold Kern, Vienna; M. Kronberger & Sohn, Budapest. These

firms are said to have bought, some three or four years ago, large tracts of oak forestry along the Mississippi and Missouri, and to have sent out Hungarian workmen to prepare the staves on the spot.

The Hungarians afterwards went home, and now these firms employ American workmen. The staves, thus prepared, are then sent to large depots established at Düsseldorf, Hamburg, Magdeburg, and Mannheim, owned by the same firms, for distribution in the German market.

The only stave dealer in my consular district is Mr. Wilhelm Hennighausen, of Nuremberg.

GUSTAS C. E. WEBER,  
*Consul.*

NUREMBERG, *October 30, 1899.*

# DRESDEN.

## IMPORTS.

The estimated value of staves consumed annually in this consular district is 300,000 marks (\$75,000). This would represent about 200 carloads of 200 centners each. One carload will hold about 6,000 staves of medium size, and 1 centner is equal to 112 English pounds.

Most of the staves consumed are imported from Austria, and particularly from Galicia and Slavonia; a small supply also comes from Russia.

## STAVES IN GREATEST DEMAND.

The kind of staves in greatest demand is for the manufacture of beer barrels, quarter barrels, and casks.

## DIMENSIONS AND PRICES.

The sizes most in use are as follows:

| Casks contain-<br>ing—      | Length.                  |                | Casks contain-<br>ing— | Length.     |                |
|-----------------------------|--------------------------|----------------|------------------------|-------------|----------------|
|                             | Staves.                  | Head-<br>ings. |                        | Staves.     | Head-<br>ings. |
| <i>Elmers.</i> <sup>1</sup> | <i>Cms.</i> <sup>2</sup> | <i>Cms.</i>    | <i>Elmers.</i>         | <i>Cms.</i> | <i>Cms.</i>    |
| 27                          | 156                      | 124            | 58                     | 201         | 159            |
| 28                          | 158                      | 125            | 60                     | 208         | 161            |
| 29                          | 159                      | 127            | 63                     | 206         | 164            |
| 30                          | 161                      | 128            | 65                     | 209         | 166            |
| 31                          | 163                      | 130            | 68                     | 212         | 168            |
| 32                          | 165                      | 131            | 70                     | 214         | 170            |
| 33                          | 167                      | 132            | 73                     | 216         | 171            |
| 34                          | 168                      | 133            | 75                     | 219         | 173            |
| 36                          | 174                      | 139            | 78                     | 221         | 175            |
| 40                          | 177                      | 141            | 80                     | 223         | 177            |
| 42                          | 180                      | 143            | 83                     | 225         | 179            |
| 45                          | 185                      | 146            | 85                     | 227         | 182            |
| 48                          | 189                      | 150            | 88                     | 230         | 184            |
| 50                          | 191                      | 152            | 90                     | 232         | 185            |
| 53                          | 195                      | 155            | 95                     | 236         | 188            |
| 55                          | 197                      | 157            |                        |             |                |

<sup>1</sup> Elmer = 15 gallons.

<sup>2</sup> Cms. (centimeter) = 0.3937 inch.

The "eimer" is a special measure adopted by the Austrian dealers for the sale of staves, well known in the trade throughout Europe. It is equal to about 0.057 cubic meters.

*Slavonian staves for small transportation barrels.*

| Holding.        | Length.        | Thick-<br>ness at<br>ends. | Price per three<br>square layers. <sup>1</sup> |                                      |
|-----------------|----------------|----------------------------|--|--------------------------------------|
|                 |                |                            | Marks.   | United<br>States<br>equiva-<br>lent. |
| <i>Eimers.</i>  | <i>Inches.</i> | <i>Inches.</i>             |  |                                      |
| $\frac{1}{4}$   | 16.58          | 2                          | 1.50   | \$4.357                              |
| $\frac{1}{2}$   | 17.72          | 2                          | 2.50   | .596                                 |
| $\frac{3}{4}$   | 19.29          | 2                          | 2.90   | .69                                  |
| 1 $\frac{1}{4}$ | 23.23          | 2                          | 4.20   | 1.44                                 |
| 2 $\frac{1}{4}$ | 27.56          | 2                          | 6.30   | 1.50                                 |

<sup>1</sup> In the quadrat-lagen or "square layer" of staves, the four sides are the length of the stave itself. The prices given are for three layers (for staves) and two layers (for headpieces), which means that the layer is piled up two or three times, as the case may be. All the above prices are understood free at railroad station at place of consumption.

There is also a thinner quality of staves offered by the Austrians.

The staves are not more than 40 mm. (1.57 inches) thick at ends and sell per three square layers as follows: Holding  $\frac{1}{4}$  eimer, 55 cents; holding  $\frac{1}{2}$  eimer, 62 cents; holding 1 $\frac{1}{4}$  eimers, 84 cents; holding 2 $\frac{1}{4}$  eimers, \$1.14.

The headpieces are sold per two square layers as follows:

| Length.    | Inches. | Marks. | United<br>States<br>equiva-<br>lent. |
|------------|---------|--------|--------------------------------------|
| <i>Cm.</i> |         |        | <i>Cents.</i>                        |
| 32         | 12.60   | 0.65   | 15.5                                 |
| 36         | 14.96   | .80    | 19                                   |
| 42         | 16.53   | 1.06   | 25                                   |
| 52         | 20.47   | 1.55   | 36.9                                 |

STAVES TO COMMAND BEST PRICE.

In order to command the best price and give the most satisfaction, the staves should be of uniform shape and length; they must be carefully split, like the Slavonian, and be not too thick. The length and thickness of the staves should be in meters (39.37 inches) and centimeters (0.3937 inches) and not in feet and inches, the latter measurements being larger. The American stave has, in the experience of the German manufacturer, been mostly too long and too thick. Red oak should not be mixed with white.

BEST STAVE TIMBER.

The kind of timber most desirable is white oak (in German, "Weiss-Eiche"). The wood should be of fine grain, soft, and not too tough. The Slavonian wood has these advantages, and is therefore preferred

to all other kinds. The American wood, at least such as has been offered on the German market, is of coarse grain, and not soft enough—in fact, sometimes so tough that it is hardly fit for use.

#### AMERICAN STAVES.

American staves are sold in this district, particularly for the manufacture of large barrels, Nos. 63 to 95. One of the largest barrel manufacturers in this Kingdom assures me that the American staves have been very satisfactory during the last two or three years, while before that time they were very bad, carelessly split, and carelessly assorted.

In making shipments, it will be necessary to send material for the centerpiece of the head, which must be at least 35 to 40 centimeters (13.78 to 15.7 inches) wide, one centerpiece being sufficient for two square layers of staves. Material for the other two headpieces can be found in the ordinary stave. When material for the center headpiece is not sent, manufacturers are compelled to purchase elsewhere, and dealers refuse to furnish these special sizes alone.

In my investigation I met with general complaint, not only from dealers in staves but from lumber dealers and manufacturers, regarding the condition of the wood. The parties say the trees are cut in summer instead of the winter, and immediately subjected to kiln heat instead of first being allowed to partially dry out naturally. The result is the wood is filled with small cracks that make American lumber objectionable and expensive to work. Purchasers also object to the hard, brittle nature of some staves received from America, which are difficult to work, this being mainly done in Germany by hand labor. This may be another result of kiln-dried timber.

CHAS. L. COLE,  
*Consul-General.*

DRESDEN, *October 19, 1899.*

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#### FRANKFORT-ON-THE-MAIN.

##### CONSUMPTION.

In the district of the Frankfort consulate-general, there are consumed annually approximately 200 European carloads, or 100 American carloads, of staves, at a value of 250,000 marks (\$59,500).

##### SOURCES OF SUPPLY.

The supply came in 1898 to the extent of about 84 per cent from Austria-Hungary and Russia, and 16 per cent from the United States, mainly from the ports of Baltimore and New Orleans. The price for the different kinds is subject to strong fluctuations and is dependent on

the condition of the supply on hand. It may be approximated, however, that the European carload of 10 tons has a value of from 1,200 to 1,300 marks (\$285.60 to \$309.40) f. o. b. Frankfort.

#### DIMENSIONS.

Staves should be split, hewn smooth, and should be free from flaws. Staves of the following lengths should be of the following thicknesses:

| Length.      | Thickness.     |
|--------------|----------------|
| <i>Feet.</i> | <i>Inches.</i> |
| 4            | 2½             |
| 4½           | 2½             |
| 5            | 2½             |
| 5½           | 3              |
| 6            | 3½             |
| 6½           | 3½             |
| 7            | 3½             |
| 7½-8         | 4              |
| 8½-9         | 4½             |
| 9½           | 4½             |
| 10           | 4½             |

Width, from 5½ to 8 inches; some even wider.

Only white oak should be used.

The staves in greatest demand are those over 5½ feet in length.

#### PURCHASING.

These staves are usually bought at some trade center in the interior, rarely at the port. The staves should be furnished to the consumers freight prepaid. Some large customers buy several carloads at a time; others buy in one-carload lots. Promptness in filling orders is essential.

RICHARD GUENTHER,  
*Consul-General.*

FRANKFORT-ON-THE-MAIN, *October 25, 1899.*

#### MAINZ.

#### AMERICAN VS. HUNGARIAN STAVES.

Mainz is one of the centers of the stave trade in Germany. This is due to the fact that Mainz is in the heart of the wine-growing district, and the production of wine necessarily entails the manufacture of wine casks. In the manufacture of wine casks only first-class oak, free from all defects, is used. Only during the past six or seven years has oak for this purpose been imported from the United States. Prior to that time Hungary supplied the local market with wine-cask staves entirely. With the decreasing supply of Hungarian oak, the local importers turned to the United States as a new source for their supply, but our exporters have still a great deal to learn if they wish to do a profitable business in the export trade of oak staves.

Only split oak can be used for wine-cask staves; consequently only such stems as are free from gnarls must be selected. American oak is equally as good as Hungarian oak for wine-cask staves, and, other things being equal, even an expert can hardly tell the difference between the two. American oak is slightly heavier than Hungarian.

The great trouble with the American staves that reach this market is that they are not dressed properly. I have inspected large lumber yards in this city, and the difference between Hungarian and American oak staves was at once apparent to me. The Hungarian staves are so dressed that not one shred of sapwood remains. The sapwood is entirely worthless, and if left on the lumber only tends to increase the cost of transportation. On the American oak staves almost one-fifth is a total loss, owing to the fact that almost the entire sapwood is left on the timber. Consequently local importers, when figuring the cost of American staves, always calculate about one-fifth as loss. American lumbermen will probably say that wages are too high to permit of stripping the staves of the sapwood, and that this can be done more cheaply over here. But the increase in transportation charges on this refuse material more than counteracts the difference in wages, and our exporters would do well to dress their timber as the Hungarians do and thereby be able to command a better price.

I am told that Hungarian firms which have exhausted their timber fields bring their Croatian workmen to the United States, cut timber there, dress it according to their custom, and export it to this country, commanding better prices than that shipped by American firms.

It is, of course, superfluous to say that the timber must be cut in the winter after the sap has receded.

The timber for staves must be split, not sawed, and the lengths average 6 feet to 8 feet 6 inches.

WALTER SCHUMANN, *Consul*.

MAINZ, *November 6, 1899.*

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#### POMERANIA.

The demand for and use of imported staves in this consular district (Pomerania) is limited almost exclusively to very cheap cement barrel staves, of which about \$130,000 worth are used per year by the local cement manufacturers. About one-third is of immediate native origin, while the balance is imported from Finland, Russia, and Sweden. Memel, close to Russia, is the principal German market for the export and import of cement barrel staves, which are delivered at Stettin at a cost of 60 pfennigs (14.28 cents) per 3 rumpfs (a rumpf is three flat layers of staves, each layer 28 inches square); 28 inches being the length of the staves, and the width  $2\frac{1}{2}$  to 5 inches, a width between 3 and 4 inches being preferred. Mode of delivery is in full shiploads, loose, usually in ships with a capacity of 250 to 300 tons,

at a freight rate of 9 marks (\$2.14) per 50 cubic feet from Finland and 8 marks (\$1.90) from Sweden to Stettin.

### PRUSSIA.

Danzig, in West Prussia, is a large market for oak staves, handling about 10,000 shocks (60 pieces per shock) at an approximate value of \$47,500, the greater part of the supply coming from Russia and Austria (Silesia), in dimensions 1 and 1½ inches thick, 4 inches broad, and 42 inches in length, sell from 18 to 25 marks (\$4.29 to \$5.95) per shock (60 pieces). Headings, 1½ and 1½ inches thick, 4 to 12 inches broad, and 30 to 36 inches long, sell at 10 to 15 marks (\$2.39 to \$3.57) per shock. Staves are to be free from sap and knots and not to be crossgrained.

The export from Danzig goes to Great Britain, France, Sweden, and Denmark. From what I can learn, no American oak staves have been sold in Danzig, the place being more of a distributing point for Russian and Austrian staves than for consumption.

JOHN E. KEHL, *Consul*.

STETTIN, *November 10, 1899.*

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### RHINELAND.

#### CONSUMPTION.

White-oak staves are principally in demand in the Rhineland, and while the value of the same is likely to approximate \$2,500,000, it is very difficult to correctly state the number of staves annually required.

The largest demand for staves comes from manufacturers of beer barrels (large and small), and in this locality the American article seems to exceed that from any other country. In this district, however, there are no large manufactories. There is one large concern in Düsseldorf and one in Cassel. Those in this district are worked in connection with and for the exclusive use of special industries, in which considerable repairing is carried on.

#### SOURCES OF SUPPLY.

The supply of white-oak staves is received mostly from the United States and Hungary, but Russia and Slavonia also find a market here to a limited extent. The prices range from \$23 to \$71 per cubic meter (35.316 cubic feet), being influenced and regulated in accordance with the supply and demand, and as a result often fluctuating greatly.

#### STAVES IN GREATEST DEMAND.

In order to command the highest prices and meet with a ready sale, the staves must be offered in a smooth-cut condition, and must be free of knots and crack blemishes, as well as thoroughly seasoned.

## DIMENSIONS.

The tough white-oak stave is more generally used, but large quantities of beech and fir staves are used in the Rhineland for barrels for cement and chemical works, etc. The making of beech and fir staves is almost solely confined to Germany, saws being used in cutting the same. I am unable to give any figures relating to this branch of the industry.

On account of the great variety of staves in use it is very difficult to enumerate and describe their dimensions, and I can only say that the lengths most in use for small barrels run from 52 to 75 centimeters (20.47 to 29.5 inches), and for storage barrels from 180 to 280 centimeters (71 to 110 inches); for vats, from 130 to 165 centimeters (51 to 65 inches).

## OUTLOOK FOR AMERICAN STAVES.

I regard the trade in staves in Germany as especially favorable to the United States, and the trade prospects for the future encouraging.

JOHN A. BARNES, *Consul*.

COLOGNE, *November 21, 1899.*

## SILESIA.

## CONSUMPTION AND PRICES.

There is a large factory for the manufacture of casks, barrels, and coops in Breslau. The usual daily consumption of staves in this factory amounts to about 4,000 to 5,000 pieces; in the Province of Silesia, to about 6,000 to 7,500 pieces. The value of staves daily consumed in the Breslau factory is estimated to be about 350 marks (\$83.30). The staves used are exclusively of white oak. The greatest demand is for staves for small beer casks from 15 inches to 27 inches long and from 1½ to 2 inches thick. The prices paid for staves are as follows:

Per cask (3 square layers) of—

|                      |         |
|----------------------|---------|
| 15-inch staves ..... | \$0.357 |
| 18-inch staves ..... | .547    |
| 22-inch staves ..... | .833    |
| 27-inch staves ..... | 1.309   |

For staves from 41 to 45 inches long, mostly used for spirit barrels (70 liters), from 42.8 cents to 44 cents; per barrel, from \$3.57 to \$4.284; for larger staves, 59.5 cents to 77.3 cents.

## SOURCES OF SUPPLY.

Large staves are imported from South America, especially by the firm of Carl Gaertner, of Hamburg; middle and small staves come partly from Slavonia and Hungary, and are partly manufactured here in Silesia.

## STAVES MOST IN DEMAND.

The most satisfactory staves must be split radially toward the stem above the "spiegel," and must be uniform in thickness. The only timber used for staves is tough white oak.

NEANDER ALEXANDER,  
*Vice and Acting Consul.*

BRESLAU, *November 4, 1899.*

## GREECE.

PATRAS.<sup>1</sup>

The staves imported and used in this consular district, which embraces practically all of the currant-producing territory in Greece, amount to between 3,500,000 and 4,500,000 each year. The prices to the consumer range from \$13 to \$13.50 per 1,000 staves, making the total value of the yearly imports from \$47,000 to \$59,000.

The staves now supplying this market are brought mostly from Austria-Hungary, and are of white beech wood. The elm staves formerly imported from the United States were considered superior in quality.

## STAVES WHICH COMMAND HIGHEST PRICES.

Staves of uniform thickness and strength, whether of beech, elm, or other woods, which make the strongest and lightest barrels, will command the highest prices.

Each barrel is packed with an average of 300 pounds of currants, and is roughly handled in the shipping, so that staves of the greatest strength are required to stand the strain.

Owing to the high freight charges for long transportation, staves should be shipped loose in bulk, or in bundles of such size as will insure economy in handling. The best prices are obtained against "bills of lading."

Consignments from exporters would obtain still better prices. At the present time, however, no consignments are made. Most sales are now made cash, against documents, or with time allowance of from three to six weeks.

## DIMENSIONS.

The dimensions of staves in use vary from 31 to 32 inches in length, 4 to 5 inches in width, and one-half to five-eighths inch thickness.

The elm stave, first quality, length 32 inches, formerly exported from the United States, could compete successfully in quality against any stave sent to this market, and there is every reason to believe that

<sup>1</sup> A report, fully covered by the Patras report, was also received from Consul McGinly, of Athens.

staves of any wood which will make a clean, strong barrel will be equally successful.

#### SUPPLY AND DEMAND.

The present supply, principally from Austria-Hungary, appears to be remarkably uniform, both in quality and price. It is brought here in Austrian ships.

The demand for staves is dependent solely upon the size and quality of the currant crop. The poorer the quality of the currants the more barrels are used, as only the cheaper grades are shipped in barrels.

For many years, and up to within the past few seasons, American staves were in this market.

Nearly all staves are delivered before the currant-shipping season begins, viz, August 15.

Each year the number of barrels used decreases, owing to the increasing quantity of cleaned currants that are being shipped in cases, instead of being sent uncleaned, in barrels.

This has had a tendency to lower the prices of staves and barrels, and is likely to continue to do so.

#### DUTIES.

There are four separate duties on staves imported into Greece. They include an import duty, pierage duty, municipal duty, and a duty for the benefit of charitable institutions, the whole amounting to \$1.62 per 1,000 staves

ALONZO C. YATES, *Consul*.

PATRAS, *December 27, 1899.*

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#### ITALY.

##### AMERICAN STAVES IN ITALY.

From the much-begrudged information extracted from importers of staves, I draw the conclusion that Austrian staves cost as much laid down in Genoa as the American product. But the consumer prefers the American stave, when terms are equal to those offered by other countries, as is clearly illustrated in the fact that of the 3,000,000 staves annually imported into this city (Genoa) 2,500,000 are American.

Away from the seaboard, however—that is, in the interior cities of Italy—Austria seems to have the monopoly of the stave trade. This is, first, because of its close proximity to this country and consequently cheaper rates of freight than the importer of American staves can possibly obtain, with 4,674 miles of sea between United States ports and Genoa; and, secondly, because the American seems to make but little effort to extend his trade beyond seaport cities of

Italy. Owing to these facts, millions—some say tens of millions—of Austrian staves are consumed annually in the interior provinces of this Kingdom, and but very few of the American production.

Complaint is also made that the American exporter does not always carry out his part of a contract; and because of this breach of business agreement, a few importers volunteered the statement that the demands for the American stave are surely on the decline. One gentleman who has been an importer of American staves for twenty years not long ago wrote me a letter on this subject, a portion of which I present, as follows:

There is no doubt as to the preference in wood; the white oak stave is the choice. \* \* \* The import of the American product is gradually decreasing, partly on account of high price, but principally because we can not get the quality contracted for. It is believed that the trade in American staves would double if the exporter would scrupulously carry out his part of any contracts made. \* \* \* The exporters these days mix in lower grade with the higher grade ordered, thus causing much argument and trouble between the importer and consumer, with the result that the latter loses confidence with the wholesale dealer and discourages other would-be purchasers from investing in American staves. \* \* \* We pay in advance for American goods, and when the stuff is landed we discover a mixture of first and lower grades, while the contract called for first quality. Surely this is not right. \* \* \* Domestic and Austrian staves are not paid for until delivered to and inspected by the importer.

JAMES FLETCHER, *Consul*.

GENOA, *January 26, 1900.*

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#### CATANIA.

This consular district is the largest wine-producing territory in Italy, and therefore an important market for the stave trade.

#### PRODUCTION AND CONSUMPTION.

The seat of the cooperage industry is at Riposto, and the annual production of casks for the wine export trade will amount to 35,000 casks of 700 liters (185 gallons) capacity each, nearly all of which are made of chestnut wood taken from the large chestnut groves on the hillsides of Mount Etna.

The cost of these export casks complete, bound with iron hoops, does not exceed 20 lire (\$3.60).

The production of white oak casks does not exceed 2,000, and the wood is imported from Austria. The price for oak casks complete, bound with iron hoops, is 32 lire (\$5.75).

#### DIMENSIONS.

The dimensions are:

Staves: Length, 120 centimeters (47 inches); thickness, 32/34 centimeter (0.369 inch).

Bottoms: Length, 60 to 75 centimeters (23.6 to 29.5 inches); thickness, 0.377 inch.

For the local wine trade, casks of 34/35 liters capacity are used; the dimensions are:

Staves: Length, 87/89 centimeters (34.25 to 35 inches); thickness, 2 centimeters (0.7874 inch).

Bottoms: Length, 21/22 centimeters (8.27 to 8.66 inches); thickness, 2 centimeters (0.7874 inch).

#### COOPERAGE FIRMS.

The cooperage firms located at Riposto, Sicily, are: Giuseppe Grasso Russo, Santi Granata, Pietro Galeano Mazzullo, Pietro Cali, Leonardo Carallaro, Giovanni Parisi, Giuseppe Minntoli, Sebastiano Panarello, Gius. Grasso Tropea, Gius. Spinadi Mariano, Francesco Rapisarda, Giuseppe Vasta, Salvatore Carbonaro, Francesco Saugiorio, Giuseppe Russo, Girolamo Spina di Gius, Flli. Musumeci, Angelo Caltabiano, Mariano Zappala, Pietro Torrisi, Sebastiano Scrofina, Mario Barbagallo.

There are no manufacturers in Catania, only a few repair shops. At Syracuse, Sicily, are the following cooperages: Gaspare Aliffi di Concetto, Flli. Alliffi, Flli. Bordone, Rosario La Brelo di Concetto.

#### AMERICAN STAVES.

One of the largest wine exporters recently made this remark:

We would prefer to use oak casks and would cheerfully pay excess price over those made of chestnut wood, but the ones we had are now doing service for other parties. When we shipped wine in oak casks to the Continent they were never returned, but somewhere along the line chestnut ones were substituted, so we have ceased to buy oak casks for the use of others.

The Hamburg-American line steamers that ply between New York and Alexandria stop at Syracuse, and this would save cost of transshipment, and might be of some advantage in reaching this market.

ALEXANDER KINGARTNER, *Consul*.

CATANIA, *December 2, 1899.*

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#### GENOA.

*Imports.*—About 3,000,000 staves are imported annually into Genoa, the major part of which are forwarded by rail to the adjoining provinces of Lombardy and Piedmont.

*Prices.*—It is stated that these 3,000,000 staves are delivered on the wharf for \$192,000, or at the rate of \$6.40 per hundred.

*Staves in greatest demand.*—Staves for wine casks are in greatest demand.

*Source of supply.*—The United States and Austria furnish about all the staves consumed in this part of Italy.

*Dimensions.*—The dimensions of staves imported into Genoa are 2 feet 9½ inches, 2 feet 11½ inches, 3 feet, and 3 feet 2 inches in length, from 4½ to 5 inches in width, and from seven-eighths of an inch to 1½ inches in thickness.

*American staves.*—White oak staves are most desirable. Coopers prefer the American white oak staves to those from any other country. Of the 3,000,000 staves annually imported into Genoa, 2,500,000 come from the United States. The other 500,000 are either domestic or Austrian staves.

JAMES FLETCHER, *Consul.*

GENOA, January 26, 1900.

#### LEGHORN.

#### CONSUMPTION.

The demand for staves in this district is not large, and at present none of American manufacture are imported. Those finding a limited though steady market are made of chestnut wood and are shipped here from the Roman and Neapolitan provinces. They are shipped loosely in bulk, and this method appears to be satisfactory to the local consignee.

#### DIMENSIONS.

The sizes generally in use are as follows:

| Description.          | Length. |         | Width.  |              |
|-----------------------|---------|---------|---------|--------------|
|                       | Meters. | Inches. | Cm.     | Inches.      |
| Pipes .....           | 1.35    | 53.25   | 8 to 15 | 3.15 to 5.9  |
| Large hogsheds .....  | 1.15    | 45.28   | 8 to 15 | 3.15 to 5.9  |
| Half pipes .....      | 1.04    | 40.94   | 8 to 15 | 3.15 to 5.9  |
| Caratelli .....       | .95     | 37.40   | 8 to 12 | 3.15 to 4.7  |
| Barrels (small) ..... | .82     | 32.28   | 8 to 10 | 3.15 to 3.97 |

#### PRICES.

The price is based on what is known as the "bottata," and the average number of staves of various dimensions in a "bottata" and their cost are as follows:

| Kind.                            | Average number in a bottata. | Price per bottata. | Approximate number of bottata used in a year. | Total number of staves in a year. | Approximate value. | Approximate value. |
|----------------------------------|------------------------------|--------------------|---|-----------------------------------|--------------------|--------------------|
|                                  |                              | <i>Lire.</i>       |   |                                   | <i>Lire.</i>       |                    |
| Pipe staves .....                | 48                           | 20                 | 1,200   | 57,600                            | 24,000             | \$4,632            |
| Mogri staves .....               | 100                          | 25                 | 500   | 50,000                            | 12,500             | 2,412              |
| Half-pipe staves .....           | 100                          | 14                 | 500   | 75,000                            | 7,000              | 1,350              |
| Caratelli staves .....           | 180                          |                    |   |                                   |                    |                    |
| Staves for barrels (small) ..... | 190                          |                    |   |                                   |                    |                    |
| Total .....                      |                              |                    | 2,200   | 182,600                           | 43,500             | 8,394              |

## AMERICAN STAVES.

From inquiry made, it would appear that there is no objection to the use of American staves beyond the question of cost; and if our manufacturers or exporters can meet the prices given, a limited market for their products could doubtless be secured in this district, and I shall be glad to give them any further information desired which may be at my disposal.

JAS. A. SMITH, *Consul*.

LEGHORN; *November 23, 1899.*

## NAPLES.

Consul Byington, under date of October 27, 1899, reports that the very heavy duties levied upon these articles of American manufacture have almost totally stopped their importation, the Naples dealers obtaining their supplies from Trieste because of the considerably lower duties and less cost.

## TUSCANY.

## MANUFACTURE AND CONSUMPTION.

Wine is the staple agrarian product of Tuscany, but so far, with very few exceptions, the casks used throughout the district are the same as used by the last generation and are made under the ancient system.

Casks, barrels, pipes, etc. (old-fashioned), are constructed in every possible cylindrical shape, but they are all of inferior grade. Adapted for holding wine in the fall and in winter, many are used for various other purposes in the spring and summer months.

Staves, when not made on the farms where they are needed, are made of chestnut slabs, by common coopers or even cartwrights, who devote some months of the year to the production of rough agricultural implements, always assisted in the work by blacksmiths.

The only real stave factory in Tuscany worthy of mention is that of R. Borri (formerly Feuzi & Co.), in the immediate neighborhood of the city of Florence, where 40 adult workmen are given permanent employment, at wages from 30 to 75 cents per diem.

## SOURCES OF SUPPLY.

For making staves, oak is generally used, the first quality being from Slavonia, Hungary, and the second from Treviso, Venetia, the former being preferred for storage and the latter for transportation casks. The statement below may help American exporters of white-oak staves in familiarizing themselves with the staves in the Tuscan market. This table gives correct dimensions and retail prices.

*Staves in use in Tuscany.*

| Capacity of casks. |            | Approximate dimension of casks. |         |                   |         | Weight of casks. |            | Cost of casks. |                           |
|--------------------|------------|---------------------------------|---------|-------------------|---------|------------------|------------|----------------|---------------------------|
|                    |            | Diameter.                       |         | Length of staves. |         |                  |            | Lire.          | United States equivalent. |
| Hecto-liters.      | Gallons.   | Me-ters.                        | Inches. | Me-ters.          | Inches. | Kilo-grams.      | Pounds.    |                |                           |
|                    | 13.208     | 0.50                            | 19.685  | 0.50              | 19.685  | 20               | 44.002     | 15             | \$2.72                    |
| 1                  | 26.417     | .60                             | 23.622  | .60               | 23.622  | 26               | 57.320     | 20             | 3.63                      |
| 1½                 | 39.625     | .65                             | 25.590  | .70               | 27.559  | 36               | 77.161     | 25             | 4.54                      |
| 2                  | 52.834     | .75                             | 29.527  | .80               | 31.496  | 55               | 121.253    | 30             | 5.45                      |
| 2½                 | 66.042     | .80                             | 31.496  | .85               | 33.464  | 60               | 132.276    | 35             | 6.36                      |
| 3                  | 79.251     | .85                             | 33.464  | .90               | 35.433  | 65               | 143.299    | 40             | 7.27                      |
| 4                  | 105.668    | .90                             | 35.433  | .95               | 37.401  | 75               | 165.345    | 55             | 10.00                     |
| 5                  | 132.085    | .95                             | 37.401  | 1                 | 39.370  | 85               | 187.391    | 70             | 12.72                     |
| 6                  | 158.502    | 1.05                            | 41.338  | 1.10              | 43.307  | 105              | 231.493    | 85             | 15.45                     |
| 8                  | 211.336    | 1.15                            | 45.275  | 1.15              | 45.275  | 150              | 330.600    | 100            | 18.17                     |
| 10                 | 264.170    | 1.25                            | 49.212  | 1.25              | 49.212  | 205              | 451.943    | 120            | 21.90                     |
| 15                 | 396.255    | 1.45                            | 57.086  | 1.40              | 55.118  | 250              | 551.450    | 180            | 32.71                     |
| 20                 | 528.340    | 1.60                            | 63      | 1.60              | 63      | 400              | 881.840    | 240            | 43.61                     |
| 25                 | 660.425    | 1.70                            | 66.937  | 1.70              | 66.937  | 450              | 992.070    | 300            | 54.52                     |
| 30                 | 792.510    | 1.80                            | 70.874  | 1.80              | 70.874  | 500              | 1,102.300  | 345            | 62.28                     |
| 40                 | 1,056.690  | 1.95                            | 76.779  | 1.90              | 74.811  | 650              | 1,432.990  | 440            | 79.94                     |
| 50                 | 1,320.850  | 2.10                            | 82.684  | 2.10              | 82.684  | 750              | 1,653.450  | 550            | 100.00                    |
| 60                 | 1,585.020  | 2.25                            | 88.590  | 2.20              | 86.621  | 900              | 1,984.140  | 650            | 118.17                    |
| 70                 | 1,849.190  | 2.35                            | 92.227  | 2.30              | 90.659  | 1,000            | 2,204.090  | 750            | 136.34                    |
| 80                 | 2,113.360  | 2.45                            | 96.164  | 2.40              | 94.596  | 1,100            | 2,424.466  | 850            | 154.51                    |
| 100                | 2,641.700  | 2.65                            | 104.636 | 2.60              | 102.440 | 1,300            | 2,865.278  | 1,050          | 190.90                    |
| 200                | 5,283.400  | (3.35                           | 131.890 | 3                 | 118.110 | 2,500            | 5,510.150  | 2,000          | 363.64                    |
|                    |            | (3.10                           | 122.047 | 3.50              | 137.795 |                  |            |                |                           |
| 250                | 6,604.253  | (3.60                           | 141.732 | 3                 | 118.110 | 3,000            | 6,612.180  | 2,500          | 454.45                    |
|                    |            | (3.40                           | 133.858 | 3.50              | 137.795 |                  |            |                |                           |
| 500                | 13,208.500 | (4.50                           | 177.165 | 4                 | 157.480 | 5,500            | 12,122.690 | 4,500          | 818.20                    |
|                    |            | (4.25                           | 165.343 | 4.50              | 177.165 |                  |            |                |                           |

## AMERICAN STAVES.

It is probable that on the appearance of American staves in this market (numbered inside to indicate their position in the putting together of a cask), the local price would at once be lessened in order to meet the competition.

American exporters should note that there is a duty of \$1 per ton of 2,204.6 pounds avoirdupois on imported staves.

EDWARD C. CRAMER, *Consul.*

FLORENCE, *November 10, 1899.*

## VENICE.

## CONSUMPTION AND DIMENSIONS.

The annual consumption of staves in the consular district of Venice approximates 2,450,000, the value of the same being \$279,000. These figures are distributed as follows:

Staves (German system, thicker at the ends than in the middle) for cellar casks, 300,000, valued at \$90,000; length in greatest demand, 27.5 to 79.7 inches.

Staves (French system of equal thickness throughout) for transport butts of capacity to 600 litres (630 quarts), 2,000,000, valued at \$72,000; lengths preferred, 27.5 to 46.5 inches.

Staves (extra size) for cellar butts, 100,000, valued at \$90,000; lengths preferred, 51.2 to 236.2 inches; thicknesses, 1.95 to 3.9 inches.

Staves for cellar butts of inferior quality, 50,000, valued at \$27,000; lengths preferred, 51.2 to 236.2 inches; thicknesses, 1.5 to 3.9 inches.

#### SOURCES OF SUPPLY.

The timber from which these staves are made comes chiefly from Croatia and Slavonia, although a small amount is imported from the United States. The dressing and manufacture are effected largely in the district. I am told that Austrian oak is preferred by dealers, being finer grained and containing fewer substances injurious to wine. The American article is used for large butts of inferior quality, and is more expensive than the Austrian.

A manufacturer of this district who enjoys a considerable export trade, Antonio Walluschnig, of Conegliano, informs me that the supply of Austrian oak, of the grain desired for barrelling wine, far from being exhausted, is fully adequate to the demand. The consumption of staves in this district is almost exclusively by wine dealers and coopers who supply wine dealers, Veneto containing three of the more important wine regions in Italy. If the United States desires to contest the field with Austria, care must be taken to send out staves of the very best quality. The timber must be fine hard oak, seasoned not less than two years, and sawed with the grain.

H. ALBERT JOHNSON, *Consul*.

VENICE, *February 23, 1900.*

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#### MALTA.

##### IMPORTS.

Malta uses staves for various purposes, but principally for barrels for potatoes, which are exported to England and various Mediterranean ports. Staves not being dutiable here, I have been unable to secure statistics from government sources, as nondutiable goods are not recorded when imported. However, after considerable time spent in investigation of the subject, I have been fortunate enough to secure the following statistics from those interested in the trade: The importations of staves for 1895, 1896, 1897, and 1898 were 530,000, 866,000, 1,000,000, and 1,446,000, respectively.

The quantity of shooks imported depends upon the size and movement of the island potato crops, of which there are two during the year. The potatoes raised here are of different varieties, some of which were formerly specially packed in cases for the English market. This form of package, however, has been gradually giving way to the barrel method. Owing to the economy of cost, second-hand cracker and

cement barrels are used to a large extent. Heads are not imported but are provided from second-hand packing-box materials, of which there is always sufficient supply.

#### STAVES MOST IN DEMAND.

The staves used have been almost wholly of beech wood, and have come from Fiume, Trieste, and Venice. This kind of wood has been found most useful for the making of potato barrels; being light and elastic, they resist the changes between moisture and sun while lying exposed on the landing wharves during the time awaiting shipment.

The qualities of beech staves used here are known as "Scarto" and "Scartone" and compare with our second and third quality scantlings. The prices paid for staves during the years above mentioned averaged \$14 per 1,000 f. o. b. at Malta.

#### DIMENSIONS.

The dimensions mostly required are about 30 inches long by  $5\frac{1}{4}$  inches wide and seven-sixteenths to one-half inch thick. The stock used is half smoothed. The ends of shooks are narrowed down here before use. Attempts have been made at various times to introduce Scandinavian shooks already cut, together with heads, for immediate putting together, but the wood used has not been found suitable and the price has been higher than for goods from Fiume, Trieste, and Venice.

#### AMERICAN STAVES.

At the present time no American staves are used here, and this is due to a great extent to the fact that until recently, everything of American manufacture has reached these islands by transshipment from England and other countries this side of the Atlantic. With the direct line which is now established between New York and Malta and the low freight rates incidental thereto, it seems to me to be possible for our merchants to gain a foothold in these markets, providing we can compete in prices.

JOHN H. GROUT, *Consul*.

VALLETTA, *November 27, 1899.*

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#### NETHERLANDS.

##### AMSTERDAM.

*Consumption.*—In the absence of statistics, it is impossible to say how many staves are used in this consular district. A large number however is consumed in the manufacture of packages for fish, butter, margarin, sugar, petroleum, gin, etc.

*Kinds in demand.*—The staves in greatest demand are those used in the manufacture of pipes, hogsheads, barrels, and kegs.

*Sources of supply.*—The sources of supply are New York, Baltimore, and New Orleans.

*Staves to command highest prices.*—Staves to command the best price should be delivered rough (not dressed) and of good quality.

*Dimensions.*—The correct length of staves, light and heavy, for this market are as follows: Pipes, 54 to 60 inches; hogsheads, 44 inches; barrels, 33 and 34 inches; kegs, 22 to 26 inches.

*Best timber.*—The timbers most desirable for staves are: White oak for nearly all casks and barrels, with the exception of sugar barrels and barrels for other dry goods, which are made from Norwegian pine. Margarin casks are nearly all made of German beech.

*Supply and demand.*—There has been during the last year a very great demand for staves, with small supplies and stiff prices.

Formerly, many German and Hungarian oak staves were imported; now American white oak staves exclusively are entered.

FRANK D. HILL, *Consul*.

AMSTERDAM, *October 13, 1899.*

## ROTTERDAM.

### IMPORTS AND EXPORTS.

All the staves sold in this market are consigned by the American exporters to the commission merchants here. When sold before arrival, terms are sometimes cash; when sold after delivery, payments are generally made on three months' time.

A great quantity of staves is used by the herring packers of Vlaardingen, Maassluis, and Scheveningen, in my consular district. I could not ascertain, however, the number of staves used by herring packers. The latter are all supplied with staves from the Rotterdam market.

The value of staves imported at Rotterdam during the first six months of 1899 is as follows:

|                     |            |
|---------------------|------------|
| Norway .....        | \$2,800.00 |
| Austria ..          | 604.00     |
| Russia .....        | 400.00     |
| United States ..... | 816,802.40 |
| Belgium .....       | 14,088.20  |
| Prussia .....       | 21,514.40  |
| Great Britain ..... | 6,988.00   |
| Hamburg .....       | 13,460.00  |

Total value of imports..... 876,650.00

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Staves exported from Rotterdam during the same period:

|                           | Pounds.    |
|---------------------------|------------|
| Dutch East Indies .....   | 9,528      |
| Sweden .....              | 44,000     |
| Norway .....              | 660        |
| Belgium .....             | 326,995    |
| Prussia .....             | 9,150,057  |
| Africa (west coast) ..... | 901,538    |
| Bremen .....              | 12,540     |
| Denmark .....             | 10,560     |
| Great Britain .....       | 254,113    |
| Hamburg .....             | 586,520    |
| Portugal .....            | 89,478     |
| Cape of Good Hope .....   | 151,800    |
| Total .....               | 11,537,789 |

#### STAVES IN DEMAND.

All kinds and grades of staves are used in the Dutch market, but the greatest demand is for barrel and hogsheaf staves.

Rough white-oak staves sell best here and give the most satisfaction.

#### DIMENSIONS.

The dimensions of the staves in use here are 34, 36, 40, 44, 46, 48, and 50 inches in length, by  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inches in thickness.

Importers of staves at Rotterdam are: Moens & Kolff, J. C. & Th. H. Leyenaar, Verburgh & Son, and Mulder & Co.

S. LISTOE, *Consul*.

ROTTERDAM, *January 30, 1900.*

#### NORWAY.

#### CONSUMPTION.

Considering the size of the country, Norway consumes large quantities of barrel staves, but the material used is largely Norway pine and hemlock, or Norway spruce. Based on the average annual export of pickled herring and other fishery products, shipped in pine covering, 1,250,000 barrels of this material are consumed annually; a large number of one-half and one-quarter barrels of the same material is also used. Nearly all pine and spruce staves are manufactured in this country from native woods, and prices are so low that no outside competition could be sustained, unless goods of superior quality can be offered at the same price.

#### IMPORTS.

Of oak staves, which are an article of import, the consumption is much smaller, but still quite considerable. Much more of these

would be needed if it were not for the fact that such a great number of ready-made petroleum, margarin, molasses, and pork barrels is imported into this country from America filled with goods, and later utilized for other purposes. Of late years, the finer grades of fish oil are exported in metal casks or tin-lined barrels in place of oaken barrels, as formerly. For the cheaper grades, oaken barrels are still used. Of beech and birch staves, which are also articles of import, quite a number is used, mostly in dairies and margarin and canning establishments.

The importations of staves to this country consist nearly exclusively of oak, beech, and birch. The values of the importations in 1898 were:

| Imported from—        | Value.  |                           |
|-----------------------|---------|---------------------------|
|                       | Kroner. | United States equivalent. |
| <i>Unfinished.</i>    |         |                           |
| Sweden .....          | 16,100  | \$4,315                   |
| Denmark .....         | 3,100   | 831                       |
| Germany .....         | 36,100  | 9,407                     |
| Great Britain .....   | 200     | 54                        |
| United States .....   | 49,800  | 13,346                    |
| Total .....           | 104,300 | 27,953                    |
| <i>Finished.</i>      |         |                           |
| Sweden .....          | 370     | 99                        |
| Denmark .....         | 30      | 8                         |
| Germany .....         | 15,010  | 4,022                     |
| The Netherlands ..... | 1,200   | 322                       |
| Great Britain .....   | 70      | 19                        |
| Other countries ..... | 120     | 32                        |
| Total .....           | 16,800  | 4,502                     |

#### EXPORTS.

The export of staves from Norway consists exclusively of staves of Norway pine, spruce, and birch. The value of such exportations in 1898 were: Common staves, pine and spruce, 1,509,900 kroner; birch staves, 40,900 kroner; total, 1,550,800 kroner (\$415,614).

These are mostly unfinished staves, and the principal markets are Great Britain, Germany, and Belgium.

The Norwegian import duty on staves is: Unfinished staves, free; finished staves, 1.34 cents per kilogram (2.2046 pounds). Finished staves are such only as are planed, with or without grooves for bottoms and bottom pieces, planed, whether put together or not.

#### SIZES AND PRICES.

The common sizes for staves are:

*Pine and spruce staves.*—Length, 30.12 to 30.71 inches; width, 2.76 to 4.33 inches; thickness, 0.65 to 0.77 inch.

The bottom pieces are about 46.8 centimeters (18.43 inches) in length, and 1.95 to 2 centimeters (0.77 to 0.79 inch) in thickness.

*Prices.*—The prices of these staves vary according to quality. For the common herring-barrel staves of above size, the price is reported to be from 24 to 30 kroner (\$6.43 to \$8.04) per 1,200 pieces. The bottom staves for same cost, about 30 kroner (\$8.04) per 1,200 pieces.

*Oak staves.*—These are generally of one of the following dimensions: (1) Length, 85.8 centimeters (33.78 inches); thickness, 1.95 centimeters (0.77 inch); (2) length, 75.4 to 76 centimeters (29.68 to 29.92 inches); thickness, 1.3 centimeters (0.77 inch); (3) length, 57.2 centimeters (22.52 inches); thickness, 1.3 centimeters (0.77 inch); widths, from 7 to 11 centimeters (2.76 to 4.37 inches). Bottom staves: (1) Length, 62.4 centimeters (24.57 inches); thickness, 2.6 centimeters (1.02 inches); (2) length, 46.8 centimeters (18.42 inches); thickness, 2 centimeters (0.79 inch); (3) length, 42 centimeters (16.53 inches); thickness, 1.2 centimeters (0.47 inch).

The prices of oak staves vary according to quality. One of the barrel manufacturers gives the following: No. 1, 16 kroner (\$4.29) per 120 pieces in the rough. Of the other sizes I am unable to obtain reliable price, but the trade will be able to make estimates.

*Beech staves.*—The most common dimensions are 58 centimeters (22.8 inches) in length, and 9 millimeters (0.35 inch) when planed, or 1 centimeter (0.3937 inch) in the rough, in thickness. The bottom pieces about 42 centimeters (16.53 inches) long, and 1.2 centimeters (0.47 inch) thick.

The price of these staves is from 28 to 30 kroner (\$7.30 to \$8.04) per old thousand (1,200) with bottoms.

The foregoing prices are for goods delivered c. i. f. at port of delivery. Beech staves must be of good, sound material and well seasoned.

One of my informants believes that besides oak staves, the United States might furnish this country with staves for butter tubs, of sizes to hold from 10 to 50 kilos (22.046 to 110.23 pounds). All staves are preferred cylinder sawed.

The best way of packing for larger staves is to have them encircled in iron hoops. Smaller staves, in rough boxes or bagging. Staves must, at any rate, be strongly bound together and not exposed to wet during the passage.

#### BARREL MANUFACTURERS: AMERICAN STAVES.

Of Norwegian barrel manufacturers who are or might become interested in American staves, I will mention: C. Molstein Schroder and A. Holm, Aalesund; B. Gullaksen, Sandvigen, per Bergen; Carl E. Christiansen, Tomtegaden 20, Christiania; A. Eriksen, Christiansund; Laurviks Tøndefabrik, Laurvik; Tromsø Tøndefabrik, Trømsø.

The most direct way to ascertain what American staves could be sold in this country with profit would be to send sample staves with

lowest prices to some of the consumers, either directly or through the United States consuls at Bergen and Christiania. There is a move on foot to get the import duty on staves abolished or reduced.

HENRY BORDEWICH, *Consul*.

CHRISTIANIA, *November 20, 1899.*

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#### BERGEN.

The number of staves imported into the Bergen district per annum is about 40,000, of a value of about \$5,360.

The kind of staves in greatest demand are made of white oak.

The importations come from Pensacola, Mobile, Ship Island, and New Orleans.

The staves must be dry and easy to cut in order to command the best prices.

The dimensions vary from 30 to 60 inches. The kind of timber most desirable is white oak.

Sailing vessels loading pitch pine in the Gulf ports of the United States usually take some thousands of staves, for which the demand varies.

Besides American oak staves, large quantities of staves made in this country are used for herring and mackerel barrels, etc. These staves are made from fir and birch wood.

VICTOR E. NELSON, *Consul*.

BERGEN, *December 8, 1899.*

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#### RUSSIA.

##### TIMBER SUPPLY.

Russia has an inexhaustible supply of oak timber, and it is only a question of time when staves will be exported from Russia to other countries in Europe.

##### CONSUMPTION.

The estimated number of staves used per year is 12,000,000 for oil and 2,000,000 for wine barrels, their value being \$310,000.

The oil-barrel stave business is the only one of importance in this line in Russia. The staves are sawed on a drum saw, equalized, jointed, and fully dried, this being done at the W. Ropes & Co. factory in St. Petersburg.

##### SOURCE OF SUPPLY.

The principal supply at present comes from the Kazan and Minsk districts; they are split and hewn by hand by peasants, who purchase

the wood of the Government. Staves for oil barrels are worth \$17.50 and those for wine barrels are worth \$25 per 1,000.

#### SIZES AND TARIFF.

Staves are 36 inches long and from 3 to 6 inches wide, only oak being used.

The tariff is prohibitory. No staves can be imported into Russia except at a loss.

W. R. HOLLOWAY, *Consul-General*.

ST. PETERSBURG, *December 15, 1899.*

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#### ODESSA.

#### SOURCES OF SUPPLY.

Until about the year 1890, a considerable portion of the staves required at Odessa came from the Austrian provinces of Galicia and Bukovina, but the ruthless manner in which the oak forests in these provinces has been cut down put an effectual end to this trade. At present all of the staves used in this consular district, whether for home consumption or export, are of Russian origin, the provinces of Podolia, Volhynia, Kiev, and the Caucasus furnishing the logs. The three provinces first named are the source of supply for the Odessa trade. Staves have been brought here from the Caucasus, but the experiment did not succeed, and no attempts have been made of late in that direction. An experimental shipment of staves from Anatolia also proved unsuccessful; so that the oak staves of southwest Russia are the only ones now found on this market. These staves are of superior quality, firm, cohesive, tough, and of good straight texture, showing a smooth, very light-colored cutting surface. Prices are very steadily advancing, so that it may be assumed that the day is not far distant when the home supply will not equal the demand. By the home supply is meant the supply which is at present obtained from the southwest provinces above named. The Caucasian and Anatolian staves will probably make up the deficiency.

#### DIMENSIONS AND PRICES.

The dimensions and prices for staves on this market are as follows: 45½ inches long, 4½ to 6½ inches wide, and 1⅓ to 1½ inches thick, price, \$82.40 per 1,000 staves; 42 inches long, 4½ to 6½ inches wide, and 1⅓ to 1½ inches thick, price, \$65.92 per 1,000 staves; 38½ inches long, 4½ to 6½ inches wide, and 1⅓ to 1½ inches thick, price, \$54.59 per 1,000 staves; 31½ to 29½ (but not less than 29½) inches long, 4½ to 6½ inches wide, and 1⅓ to 1½ inches thick, price, \$36.05 per

1,000 staves. If there is one-eighth less in thickness, then one-fifth less in price is asked; but the thickness is not to be more than two-eighths less than stipulated, for which two-eighths the price is reduced two-fifths, and all pieces not conforming to the requirements are condemned and sold at considerably reduced prices for all kinds of small work. If only roughly cut, the duty per pood (36 pounds) is 6 kopecks (4.1 cents<sup>1</sup>), but if pared and planed and ready for use, the duty is 24 kopecks in gold (18.5 cents) per pood.

## EXPORTS.

Odessa exported over 40,000 tons of timber in 1898, of which 2,574 tons were oak logs, nearly all of which were sent to France. The exports of staves from Odessa in 1898, 1897, and 1896 were follows: 7,920 tons, worth \$258,500; 5,992 tons, worth \$197,500, and 9,180 tons, worth \$305,500, respectively. France and her colonies always take the bulk of these staves; 7,074 tons in 1898, while Great Britain took only 756 tons. The export of staves from Odessa seems very insignificant when compared with the enormous exports from Austria-Hungary (Bosnia). I am informed that the staves are shipped from Odessa in bulk and are not backed. American staves are not sold at present in this district.

THOS. E. HEENAN, *Consul*.

ODESSA, *February 17, 1900.*

## SPAIN.

## CADIZ.

## IMPORTS.

Owing to the decrease in the production of wines, the demand for staves is on the decline in this district.

The yearly imports average about 600,000 staves.

## DIMENSIONS.

The staves most in demand are those from New Orleans and New York, of the following kinds:

|               | Length.        | Width.         | Thickness.     |
|---------------|----------------|----------------|----------------|
|               | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| New Orleans:  |                |                |                |
| Pipe.....     | 80             | 5              | 1½             |
| Hogshead..... | 48             | 4½             | 1½             |
| Claret.....   | 40             | 4              | 1½             |
| Barrel.....   | 33-36          | 4              | 1½             |
| Culls.....    | 60             | 4              | 1½             |
| New York:     |                |                |                |
| Pipe.....     | 54             | 4              | 1½             |
| Barrel.....   | 36             | 4              | 1½             |
| Claret.....   | 42-44          | 4              | 1              |

<sup>1</sup> Reductions made by the consul.

The following are also salable in small parcels:

New Orleans, extra heavy: Oil pipe, extra hogshead, extra and light barrels, and headings.

New York, extra heavy: Heavy and light prime, heavy culls, extra heavy hogsheads, extra heavy and heavy prime barrels.

#### IMPORTERS AND CONSUMERS.

The importation of staves is entirely in the hands of three or four speculators, who hold stocks and sell to the coopers and wine merchants, prices varying according to the staple cost, with a large margin to the importers.

The principal consumers being men of small or no capital, can not purchase their requirements direct from shippers in the United States, as they are quite unacquainted with business ways, and have no commercial credit.

Only well-seasoned staves have an outlet in this market. The importers are Lacave & Co., Garcia Ravina Hermanos, and José E. Gomez, all of Cadiz.

JOHN HOWELL CARROLL, *Consul*.

CADIZ, *October 25, 1899.*

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#### MALAGA.

#### IMPORTS.

A conservative estimate of the number of staves used in this consular district would be about 4,000,000 annually, Malaga alone consuming 1,500,000 and Almeria the larger part of the remainder; all are of American origin and mostly imported direct.

#### DIMENSIONS AND PRICES.

The kind of stave in general demand here is dark oak, white and yellow having absolutely no value or sale. Sizes and prices are as follows, per 1,200 pieces: Dark oak, 60 inches, double extra, 2 red spots, 2,000 pesetas; 60 inches, double extra, 1 red spot, 1,750 pesetas; 60 inches, double extra, 1 yellow spot, 1,500 pesetas; 48 inches, for casks, with or without spot, 1,250 pesetas.

Sixty-inch "calls" and 33-inch "extra barrel" are also in demand. Better prices for any or all of the above dimensions could be had if stock came better cured and a little heavier, the only complaint reaching me being that the staves are too green.

#### SUPPLY AND DEMAND.

The supply is seldom equal to the demand, the stock in sight at present moment being but 100,000.

The staves used here are imported through parties in Barcelona,

and undoubtedly, should an enterprising American come here, willing to keep a large supply of properly dried staves on hand, a very good business would be opened to him.

R. M. BARTLEMAN, *Consul*.

MALAGA, *October 25, 1899.*

## SWEDEN.

### IMPORTS.

Staves are used in Sweden for kegs, barrels, and casks for butter, herring, snuff, soft soap, sugar, sirup, petroleum, beer, small beer, cement, and chalk.

Coopers here say that fir and spruce staves for herring barrels, etc., and beech staves for butter firkins can not, with advantage, be imported from the United States, because the costs of freight would be too high, and also because the raw material produced in Sweden is sufficient to meet the demand. Oak of excellent quality also grows in Sweden, but is getting more scarce and expensive every year, wherefore it may be said that oak staves, especially large sizes, are those mostly in demand as far as imports from the United States are concerned. Small oak staves are usually of Swedish origin; large staves and heading are bought from Germany, Bavaria, and Russia. Many coopers prefer Slavonian staves.

Staves and coopers' work imported in 1897 were as follows:

| Description.                               | Cubic feet. | Value.  |
|--|-------------|---------|
| Staves of fir or spruce from—              |             |         |
| Norway .....                               | 14,799      | \$1,480 |
| Denmark .....                              | 247         | 24      |
| Germany .....                              | 2,613       | 258     |
| Total .....                                | 17,659      | 1,742   |
| Staves of other kinds of wood from—        |             |         |
| Norway .....                               | 741         | 141     |
| Finland .....                              | 177         | 34      |
| Denmark .....                              | 353         | 67      |
| Germany .....                              | 12,326      | 2,338   |
| The United States .....                    | 232         | 54      |
| Total .....                                | 13,879      | 2,634   |
| Coopers' work of fir or spruce from—       |             |         |
| Norway .....                               |             | 20      |
| Finland .....                              |             | 176     |
| Denmark and Germany .....                  |             | 1       |
| France .....                               |             | 3       |
| Total .....                                |             | 200     |
| Coopers' work of other kinds of wood from— |             |         |
| Norway .....                               |             | 414     |
| Finland .....                              |             | 12      |
| Denmark .....                              |             | 21      |
| Germany .....                              |             | 138     |
| The Netherlands .....                      |             | 57      |
| France .....                               |             | 753     |
| Total .....                                |             | 1,385   |
| Grand total .....                          |             | 5,971   |

## EXPORTS.

Staves and coopers' work were exported in 1897 as follows:

| Description.                 | Cubic feet. | Value.   |
|------------------------------|-------------|----------|
| Staves of fir and spruce to— |             |          |
| Norway.....                  | 4, 097      | \$404    |
| Denmark.....                 | 18, 119     | 1, 787   |
| Germany.....                 | 203, 843    | 26, 322  |
| The Netherlands.....         | 67, 859     | 7, 546   |
| Belgium.....                 | 255, 805    | 25, 203  |
| Great Britain.....           | 945, 765    | 93, 567  |
| France.....                  | 122, 595    | 12, 093  |
| Total.....                   | 1, 653, 763 | 166, 942 |
| Other kinds of wood to—      |             |          |
| Norway.....                  | 16, 065     | 3, 042   |
| Denmark.....                 | 77, 580     | 14, 774  |
| Germany.....                 | 7, 417      | 1, 407   |
| Great Britain.....           | 19, 249     | 3, 651   |
| Total.....                   | 120, 561    | 22, 874  |
| Coopers' work to—            |             |          |
| Norway.....                  |             | 31, 867  |
| Finland.....                 |             | 370      |
| Russia.....                  |             | 2, 274   |
| Germany.....                 |             | 141      |
| Great Britain.....           |             | 15, 153  |
| Total.....                   |             | 49, 855  |
| Grand total.....             |             | 230, 671 |

The figures relative to import should not be considered absolutely reliable, inasmuch as some of the staves imported from Germany may have been the product of Slavonia, and some of the staves imported from Denmark may have been of American origin, etc.

The staves and headpieces imported are generally rough-cut, because there is no import duty on these. They are not packed, but are sent loose.

## PRICES.

Prices of large staves are usually quoted per piece; for smaller staves, per great thousand (1,200 staves) or per "ring" (240 staves), with or without heading. Certain coopers buy oaks on the root in Sweden, and hence claim that they are unable to state exactly how much the staves cost. German exporters also quote prices per running meter of staves, of a given length and thickness, placed side by side with edges together. Thus, if the staves are about 15 centimeters wide (5.9 inches), 6-7 staves will make one running meter (39.37 inches); if the staves are about 12 centimeters (4.76 inches) wide, 8-9 staves go to the meter, of rough-hewn staves, the difference in price depending mainly upon the length of the staves.

A German exporter offers oak staves at the following prices:

| Kind.  | Marks. | United States equivalent. |
|--|--------|---------------------------|
| Staves about 200 centimeters (78.74 inches) long and about 6 centimeters (2.36 inches) thick, per width of 100 centimeters (39.37 inches), measured across the staves..... | 21.60  | \$5.14                    |
| Round, closely-laid headings, about 167-168 centimeters (65.75 to 66.14 inches) long, per each laid width of 100 centimeters.....  | 22.70  | 5.40                      |
| Staves about 218 centimeters (85.83 inches) long and about 7 centimeters (2.76 inches) thick, per 100 centimeters crosswise.....   | 25.65  | 6.10                      |
| Round, closely-laid headings, about 177-178 centimeters (69.68 to 70.08 inches) long, per each 100 centimeters laid width.....   | 25.20  | 6.00                      |
| Staves about 232 centimeters (91.34 inches) long and about 8 centimeters (3.15 inches) thick, per 100 centimeters laid width.....  | 28.90  | 6.88                      |
| Round, closely-laid headings, about 191 centimeters (75.2 inches) long, per 100 centimeters laid width.....  | 29.25  | 6.96                      |

Free at Gothenburg, but eventual import duty, local costs, etc., to be paid by the consignee.

The above prices are considered rather high, however.

#### DUTY AND DIMENSIONS.

Finished staves and headings, ready to put together in barrels, casks, or kegs, pay a duty of 4 öre (1.07 cent) per kilogram (2.2046 pounds). Oak staves should be split (not sawed) and hewed off to even thickness in both edges and ends, and should be free from surface wood and knots.

#### *Dimensions of oak staves.*

| For—                      | Length. |         | Width.   |               | Thickness. |         |
|---------------------------|---------|---------|----------|---------------|------------|---------|
|                           | Cm.     | Inches. | Cm.      | Inches.       | Cm.        | Inches. |
| Large beer casks.....     | 180     | 70.87   | 15 to 20 | 5.91 to 7.87  | 8          | 3.50    |
| Headpieces for same.....  | 125     | 49.61   | 25 to 40 | 9.84 to 15.75 | 8          | 3.50    |
| Large beer casks.....     | 150     | 59.06   | 12 to 20 | 4.72 to 7.87  | 7          | 2.76    |
| Headpieces for same.....  | 120     | 47.64   | 25 to 35 | 9.84 to 19.68 | 7          | 2.76    |
| Smaller beer casks.....   | 120     | 47.64   | 12 to 15 | 4.72 to 5.91  | 5          | 1.97    |
| Beer barrels.....         | 85      | 33.46   | 10 to 12 | 3.94 to 4.72  | 5          | 1.97    |
| Beer half barrels.....    | 70      | 27.56   | 10 to 12 | 3.94 to 4.72  | 5          | 1.97    |
| Beer quarter barrels..... | 60      | 23.62   | 10 to 12 | 3.94 to 4.72  | 4          | 1.57    |
| Beer eighth barrels.....  | 45      | 17.72   | 9 to 11  | 3.54 to 4.38  | 4          | 1.57    |

Staves 7 feet long, 3 inches thick, and 6 to 7 inches wide are sometimes used.

For other purposes, the following sizes are also used:

| For—                      | Length. |         | Width.   |              | Thickness. |              |
|---------------------------|---------|---------|----------|--------------|------------|--------------|
|                           | Cm.     | Inches. | Cm.      | Inches.      | Cm.        | Inches.      |
| Sundry purposes.....      | 114     | 45.31   | 10 to 12 | 3.94 to 4.72 | 3 to 4     | 1.18 to 1.57 |
|                           | 95      | 37.40   | 10 to 12 | 3.94 to 4.72 | 3 to 4     | 1.18 to 1.57 |
| Wine, beer, oil, etc..... | 85      | 33.46   | 8 to 12  | 3.50 to 4.72 | .25        | .098         |
|                           | 60      | 23.62   | 7 to 10  | 2.76 to 3.94 | .25        | .098         |
|                           | 45      | 17.72   | 12 to 20 | 3.94 to 7.87 | .25        | .098         |
| Headpieces for same.....  | 50      | 19.68   | 12 to 20 | 3.94 to 7.87 | .25        | .098         |
|                           | 40      | 15.76   | 12 to 20 | 3.94 to 7.87 | .25        | .098         |

The brewers always use oak staves for their casks, barrels, and kegs.

#### AMERICAN STAVES.

I am informed that Svenska Petroleum Aktiebolaget, in Malmö, has bought some sawed American oak staves, intended for petroleum barrels. A cooper in Gothenberg has told me that he has tried American oak staves, but considered them too expensive. He also said that they were not well cut, being often thicker in one edge than in the other.

American exporters are advised to send quotations, however. In so doing they should definitely state terms, and also freight rates to Swedish ports, in case the staves are not sold free at Swedish port of entry. I am informed that the following firms sometimes import German staves: Stockholm—R. T. Looström, Mek. Tunnbinderifabrik; F. Lundberg, Stora Badstugatan 5; J. E. Olsson, Östgötagatan 46 and 48; Malmö—S. Anderssons, Tunnbinderi; Gefle—C. H. Götze, Tunnbindare; Gothenberg—G. A. Svensson, Vallgatan 27.

Mr. A. R. Rajalin, managing director of Munchens Bryggeriaktiebolag, brewer, of Gothenberg, desires to get price quotations on a sample shipment of American oak staves. He thinks that he ought to get the staves about 20 per cent cheaper than the prices on the German staves mentioned. The staves should be sent loose, without any packing, but the bill of lading should clearly state the number of staves and headpieces sent.

#### PRODUCTION.

According to the official statistics, the production in Sweden of staves, etc., was in 1897 as follows:

| Description.                         | Cubic feet. | Value.    |
|--------------------------------------|-------------|-----------|
| Staves, of fir or spruce .....       | 2,222,332   | \$244,804 |
| Staves, of other kinds of wood ..... | 191,098     | 24,018    |
| Total .....                          | 2,413,430   | 270,822   |

The production of ready-made casks, barrels, kegs, and butter firkins, same year, was valued at \$164,391, which is probably too low a figure.

ROBERT S. S. BERGH, *Consul.*

GOTHENBERG, *November 16, 1899.*

#### SWITZERLAND.

##### IMPORTS AND DIMENSIONS.

There is absolutely no way of finding out the number and value of staves used in Switzerland, but large quantities are employed. White-oak staves from 40 to 270 centimeters (15.75 to 101.30 inches) in length are mostly in demand.

## SOURCES OF SUPPLY.

The sources of supply are Hungary, Servia, Bosnia, and Croatia, and the price depends on the size, quality, finish, etc.

## STAVE WOOD IN DEMAND.

The wood must be white oak, cut in winter; must not have any defects, and should be cut from three to four years before it is used.

## OPENING FOR AMERICAN STAVES.

Owing to the heavy transportation charges, only large sizes of staves, 200 centimeters (78.74 inches) in length and upward, could profitably be imported from the United States. Smaller sizes, which are mostly used here, can be obtained cheaper from the countries named.

Hungary sells through agencies, freight paid to place of destination; terms, four months, or 2 per cent off for cash.

Direct importation of white-oak staves from the United States to Switzerland in 1898 amounted in value to \$15,000. Larger quantities of our staves were received from houses in Antwerp, Hamburg, and Dusseldorf, but the amount and values do not appear in the Swiss statistics.

The importation of staves from the United States ought to be greatly increased, and might be if a large stock of staves of the proper size and quality were kept at such places as Antwerp, Rotterdam, and Mannheim. The latter place is a great distributing point for Switzerland. From Mannheim, a carload could be shipped to Switzerland on order in a short time. It takes a long time to get staves on order from the United States. A good stock at the points named would, I think, prove a successful enterprise.

JAMES T. DUBOIS, *Consul-General*.

ST. GALL, *November 4, 1899.*

*Imports and exports of staves into and from Switzerland in 1898.<sup>1</sup>*

## FINISHED STAVES, COOPER WARE, BARRELS.

| Countries.         | Imports.  |                            | Exports.  |                            |
|--------------------|-----------|----------------------------|-----------|----------------------------|
|                    | Quintals. | Average value per quintal. | Quintals. | Average value per quintal. |
| Germany.....       | 2,063     | \$7.72                     | 158       | \$3.31                     |
| Austria.....       | 466       |                            | 2         | 13.21                      |
| France.....        | 249       |                            | 1,113     | 6.56                       |
| Italy.....         | 491       |                            | 45        | 5.18                       |
| Spain.....         | 7         | 5.79                       |           |                            |
| United States..... | 1         |                            |           |                            |
| Total.....         | 3,277     | 21,449.00                  | 1,318     | 8,873.00                   |
| Total, 1897.....   | 5,324     | 41,101.00                  | 809       | 4,760.00                   |

<sup>1</sup> Tables prepared by Consul Frankenthal, of Berne.

*Imports and exports of staves into and from Switzerland in 1898*<sup>1</sup>—Continued.

## RAW STAVES.

| Countries.          | Quintals<br>(220.46<br>pounds). | Average<br>value<br>per<br>quintal. |
|---------------------|---------------------------------|-------------------------------------|
| <b>IMPORTS.</b>     |                                 |                                     |
| Germany .....       | 5,606                           | } \$4.246                           |
| Austria .....       | 28,971                          |                                     |
| France .....        | 606                             |                                     |
| Italy .....         | 15                              |                                     |
| United States ..... | 4,196                           | 3.474                               |
| Total, 1898 .....   | 39,570                          | 4.165                               |
| Total, 1897 .....   | 53,453                          | 4.02                                |
| <b>EXPORTS.</b>     |                                 |                                     |
| Germany .....       | 45                              | 4.081                               |
| Austria .....       | 1                               | 3.86                                |
| France .....        | 5                               | 3.842                               |
| Italy .....         | 42                              | 1.515                               |
| United States ..... |                                 |                                     |
| Total, 1898 .....   | 93                              | 2.805                               |
| Total, 1897 .....   | 121                             | 3.109                               |

## ZURICH.

## IMPORTS.

The stave trade in this country is quite an item. There are four countries which supply Switzerland with this article, as will be seen by the following official statistics for the last three years:

| Staves imported from— | 1896.             | 1897.             | 1898.             |
|-----------------------|-------------------|-------------------|-------------------|
| Austria-Hungary ..... | France<br>516,413 | France<br>803,397 | France<br>637,332 |
| Germany .....         | 163,130           | 219,323           | 125,246           |
| United States .....   | 24,760            | 65,894            | 75,510            |
| France .....          | 23,330            | 20,968            | 15,312            |

It will be noticed that Austria-Hungary furnishes the largest per cent of the staves used in Switzerland; France furnishes the least and is continually on the decrease, while the United States is on the increase.

From the above amount of staves, about 20 carloads, valued at about \$9,650, find their way into this consular district.

## STAVES MOST IN DEMAND.

The best wood for staves is white oak and the best time for cutting the timber is in winter, when there is no sap.

## AMERICAN STAVES.

The American staves are preferred, as our timber is tougher and more durable. It is naturally more difficult to dress this wood, but if it can be obtained at the same price as wood from other countries it is preferred.

<sup>1</sup> Tables prepared by Consul Frankenthal, of Berne.

Staves should be delivered clean and free from oil or grease, and are usually shipped loose.

Most of the staves shipped into this district from the United States come from Indiana. A representative of that State comes to Switzerland once a year, collects the bills himself, and studies the wants of his customers, thereby finding out exactly what is desired or not desired; the consequence is that his trade is continually increasing.

Even Hungarian dealers buy some of their staves from American firms in order to keep their customers, as the American wood is preferred to any other. American staves are supplied from Rotterdam and Dusseldorf by Hungarian dealers. I might also add that the the Hungarian firms sell staves on a credit of four months.

#### GERMAN DISCRIMINATION AGAINST AMERICAN STAVES.

I am credibly informed that the American staves are charged a higher rate of freight over the German railroads than the Hungarian or German staves, which is a discrimination against the American merchandise.

#### DIMENSIONS.

The most salable sizes of staves are from 180 centimeters to 3 meters (70.87 to 118.11 inches) in length, and the wider the better. The following is a list of the regular dimensions sold in this market:

| Centimeters: | Feet. In. | Centimeters: | Feet. In. |
|--------------|-----------|--------------|-----------|
| 160 .....    | 5 2       | 285 .....    | 9 2       |
| 170 .....    | 5 6       | 300 .....    | 9 8       |
| 177 .....    | 5 9       | 315 .....    | 10 2      |
| 191 .....    | 6 2       | 325 .....    | 10 6      |
| 206 .....    | 6 8       | 330 .....    | 10 8      |
| 223 .....    | 7 2       | 345 .....    | 11 2      |
| 227 .....    | 7 4       | 360 .....    | 11 8      |
| 238 .....    | 7 8       | 375 .....    | 12 2      |
| 245 .....    | 8 2       | 400 .....    | 12 8      |
| 258 .....    | 8 4       | 415 .....    | 13 2      |
| 269 .....    | 8 8       |              |           |

A. LIEBERKNECHT, *Consul*.

ZURICH, *October 23, 1899.*

#### THE UNITED KINGDOM.

##### BELFAST.

##### IMPORTS AND PRICES.

I have been unable to secure data as to the quantity of staves used, except in tons. In 1898, from the report of the Belfast harbor commissioners, I find that there were received at this port 1,563 tons of staves. The average value would be about \$220 per mille of 1,200

staves. A number of distilleries are located in this district, and the greater demand is for white-oak staves, heavy wine pipe, heavy and light barrel, and heavy and light hogshead. The white-oak staves are all from the United States, and shipped principally from New Orleans. The cost to the consumer delivered in Belfast is as follows: 1,200 heavy wine pipe, \$413.65; light wine pipe, \$243.32; heavy barrel, \$121.66; light barrel, \$87.60; heavy hogshead, \$243.32; single hogshead, \$121.66.

The greater portion of the staves consumed here is received in the rough or unfinished state. Elm staves, shipped principally from Canada, are used for flour barrels and packing purposes. The price to the consumer is \$10.94 per mille (1,200).

All staves delivered in order to command best prices and give satisfaction should be dry and well seasoned.

#### DIMENSIONS.

The dimensions of staves in use are: Heavy wine pipe, 60 by 4½ inches; light wine pipe, same; heavy barrel, 34 by 1 by 4½ inches; light barrel, same; heavy hogshead, 44 to 46 by 1½ to 2 by 4½ inches; single hogshead, 44 to 46 by 1½ to 2 by 4½ inches.

#### BEST STAVE TIMBER.

The most desirable timber is white oak; in fact it is the only kind that is used, with the exception of a small amount of elm staves mentioned above. The supply, as I am advised, is fully equal to the demand.

WILLIAM W. TOUVELLE, *Consul*.

BELFAST, *December 9, 1899.*

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#### BRISTOL.

Staves are used here only in nominal quantities, and there is no reasonable ground for expecting an increase. Though the local brewing interest is large, American staves are not employed in the manufacture of beer barrels. They would be used for molasses and similar products, but the sugar-refining interest in Bristol, once so important, no longer exists. It would not be worth while for our shippers to spend time and money in cultivating a market where trade could not be materially extended.

LORIN A. LATHROP, *Consul*.

BRISTOL, *January 31, 1900.*

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#### CORK.

There not being sufficient demand here to justify direct importation, all the staves used are brought from Liverpool, but are nearly

all originally from the United States. The quantity imported in 1898 was 2,098½ tons. These were principally wine-pipe and barrel staves. The wine-pipe staves were 5 feet long, 3 inches wide, 1½ inches thick, and were valued at about \$50 per ton. Barrel staves, 3 feet long, 2 by ½ are valued at about \$20 per ton. These staves arrive here in bulk, and are of oak and elm, principally oak.

DANIEL SWINEY, *Consul*.

CORK, *October 16, 1899.*

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DUBLIN.

CONSUMPTION.

As Dublin is one of the "centers" of the brewing and distilling industries of the United Kingdom, there is a large consumption of staves and timber for staves and barrel heads. Owing to the fact that many of the staves come here by way of British ports, it is not possible to give more than an approximate estimate of the quantity imported. However, as their use on a large scale is confined to a few houses, who have kindly furnished figures, I think the following estimate is fairly accurate:

The total number of staves used annually in Dublin is about 2,500,000, made up of about 1,000,000 American white oak, 1,000,000 elm, and 500,000 spruce. They are valued at about \$115,000.

SOURCES OF SUPPLY.

The white-oak staves used here come entirely from Tennessee and the neighboring States. About 1,000,000 pieces, valued at \$100,000, are consumed annually. These pieces consist of siding staves, bucked, listed, and free of sap, and heading staves, quarter sawn and free of sap. They vary in size from 13 to 54 inches long by 5 to 6 inches wide by about 1½ inches thick, according to order. They are delivered loosely, being always stowed in single pieces. They should be stowed by themselves, away from everything likely to taint, such as oil, grease, tar, etc., and never thrown on dirty quays or pavements. There does not seem to be much complaint regarding the staves. However, they occasionally vary in quality, some being knotty or curly, while a few can not be classed as American white oak.

The elm staves come from Canada and the United States, the larger part being Canadian, though just what the proportions are I can not say, as the staves come via British ports.

PRICES.

The heads and bottoms are put up in bundles of 40 and cost about \$31 a thousand. The staves are put up in bundles of 60 and cost

about \$10 a mille (1,200) delivered on the quays in Dublin, kiln-dried, shaped, and dressed. The staves vary in size from 22 to 32 inches in length by  $2\frac{1}{2}$  to 5 inches in width and seven-sixteenths of an inch in thickness, the principal size being 28 inches long by seven-sixteenths of an inch thick, with varying width.

The supply last year seems to have been rather limited, and the price a little above the average.

#### OUTLOOK FOR AMERICAN STAVES.

The spruce used comes entirely from Sweden and Norway and is sent as ordinary planks, to be cut as may be required. I was told that there was no reason why American spruce should not be used here, if it could be bought as cheaply as that now imported and of as good a quality. One dealer said he would give an order for 150,000 superficial feet, at \$15 a thousand feet, if it could be supplied. It is usually used a little thicker than elm, but in other respects the staves cut are about the same size as those of elm.

If direct shipments were made to Dublin, by way of Baltimore or Newport News, for example, it should not be difficult for our exporters to compete successfully in elm and spruce staves, which are the only staves used here that are not entirely American.

JOSHUA WILBOUR, *Consul*.

DUBLIN, *November 16, 1899.*

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#### DUNFERMLINE.

#### CONSUMPTION.

The stave trade of this consular district is principally conducted by cooper industries at Alloa,  $13\frac{1}{2}$  miles by rail from Dunfermline.

#### SOURCES OF SUPPLY.

The staves used are chiefly from Poland and America, but I find it impossible to obtain even an approximate estimate of the number and value of staves consumed, owing to this being an inland consulate.

However, very large quantities of staves from the Baltic and from America are annually employed by coopers, to meet the wants of brewers and distillers.

#### STAVES IN GREATEST DEMAND.

The staves in greatest demand are those used in manufacturing beer barrels, kegs, etc.

All staves for this district should be made from white oak, should be well seasoned, and may be shipped rough or dressed.

## DIMENSIONS.

The dimensions are the usual sizes from pipes to kegs. American white-oak staves are used in the manufacture of barrels of the various sizes used by distillers for the whisky trade and also by brewers of stout (porter). The barrels used for stout, however, have to be charred inside by firing.

## OUTLOOK FOR AMERICAN STAVES.

The staves from Baltic seaports, though much higher in price than American staves, have now a monopoly of this trade, as the brewers claim that the American staves affect the taste of the beer.

American staves consumed by coopers in this district are purchased in Glasgow and Liverpool. I am assured that if our staves could be chemically treated, so as to prevent the tannin in the sap of the staves being absorbed by the beer, it would result in an immense increase in the demand for American staves and practically shut the Baltic staves out of this market, the American ones being so much cheaper.

J. N. McCUNN, *Consul.*

DUNFERMLINE, *December 16, 1899.*

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EDINBURGH.

## AMERICAN V. CONTINENTAL OAK.

Of the 29 cooperage firms whose names appear in the Edinburgh and Leith directory, several are of the first importance. These latter firms devote practically their whole attention to manufacturing barrels, etc., for ale and beer, to meet the requirements of the many breweries in this district. Such barrels, etc., are made of Baltic oak. The remaining firms are almost exclusively occupied with jobbing and repairing whisky and wine casks.

The brewers here are most exacting as to the class of staves in barrels made for them. They have been known to protest because coopers have used staves coming through a port a few miles from Memel, instead of actually from the latter port.

In this district, American staves are not used for brewery work. It is contended that they are unsuitable for this purpose, the American oak containing, it is said, like the Canadian, an abnormal amount of tannin, and it seems up to the present no practicable means has been found for sufficiently removing it to permit barrels made of this wood to be used for beer. If beer is placed in American oak barrels seasoned in the ordinary way, after standing even for a brief period, the liquor begins to acquire a bitter and woody flavor, which soon becomes so pronounced as to seriously affect its value. Further than

this, according to the ideas of Scottish brewers, barrels made of the American staves have a prejudicial effect on the color of ale and beer. The latter objection does not, of course, apply to casks for stout and porter, nor does the former apply with such force as in the case of casks for ale and beer; nevertheless, it causes some brewers of stout and porter to refuse to use American oak casks even for these liquors, so far as the home trade is concerned. Barrels made of Baltic oak may be readily seasoned for ale and beer, as the tannin in the wood is not nearly so strong as in that from America and Canada. A brewer here, in explanation of this fact, says that the Russian and other continental oak trees when cut for staves are not so old as the average American trees used for the same purpose, and that the younger the oak is the less tannin it has in it. At a Leith cooperage I saw a "desiccating" machine for seasoning liquor barrels, which, it is claimed, quickly removes the tannin from American oak barrels sufficiently to prepare them for whisky. By this machine a "quarter cask" may be adequately seasoned in an hour, while by the hot water and soda method (aside from it being less convenient) an equal result is only obtained in eight or ten hours. The machine, which has only been on the market for about two years, was invented in Glasgow and is there manufactured. It is very simple. It blows steam, air and steam, or hot air into the finished barrels as required. The barrels are first treated with steam, then with air and steam combined, and lastly they are thoroughly dried by a current of hot air. The three processes are controlled by one lever.

Excepting for the above-mentioned drawbacks—which are, however, looked upon as serious if not insurmountable—the American staves have everything to recommend them. Among their other advantages they are notably cheaper than the Baltic oak staves, and the wood is of a freer nature. This latter quality is still of some importance, for though the more prominent works are now well equipped with machinery to which all wood comes pretty much alike, yet even at the most up-to-date cooperages a fair amount of work is still done by hand.

The objections to American staves, I understand, only apply in regard to malt liquors. I am informed that practically no other staves than the white oak from the United States and Canada are used by Scottish coopers in the manufacture of barrels, etc., for whisky. Such staves are also used by wine coopers in work on casks, though only to a limited extent, as wine casks are not made here, but only repaired.

Owing to the costliness of all oak staves and the fact that American white-oak staves are, on an average, as much as one-third cheaper than Baltic oak staves, the impression seems to be that a fortune awaits anyone who shall invent some practicable process for rendering American staves suitable for ale and beer barrels. I have heard discussed the possibility of devising some satisfactory enamel for

treating the insides of such barrels, in order to prevent the tannin from being absorbed by the liquor.

As has been indicated above, barrels for whisky are not extensively made in this district. Glasgow is the center of the whisky-cooperage industry in Scotland. Aside from an unimportant business in stout and porter casks, the coopers in Glasgow do practically no brewery work, the two or three breweries in that city getting almost all of their barrels made in the Edinburgh-Leith district.

Very little of the best class of whisky made in this country is put into new barrels. Old sherry casks are prime favorites for the purpose. They sell at double the price of new casks.

#### IMPORTS.

I know of but one important cooperage in this district which makes a leading feature of manufacturing whisky barrels. The manager of this firm estimates the total quantity of American staves used annually here as averaging about 200 "running" mille (that is to say, 240,000 staves of all sizes), weighing, roughly, 640 British tons, and valued at, approximately, £3,400 (\$16,546.10).

The total quantity of staves imported into Leith and Granton (port towns of Edingburgh) from all countries during the year ended May 15, 1899, was 10,380 tons. By far the greater proportion of these were oak staves grown in Russia. Few Austrian staves are now imported.

I may mention that besides oak staves, there are also imported into this district birch and spruce staves and other varieties. They come from Drammen and elsewhere; none of them come from the United States.

#### DIMENSIONS AND PRICES.

The following table gives the dimensions and estimated average current prices per mille (1,200 pieces) of all the principal sizes of American staves in use for whisky coopering in this district. The widths given are average, free of sapwood. The other dimensions are minimums:

| Description.                    | Length.        | Width.         | Thick-<br>ness. | Value.   |
|---------------------------------|----------------|----------------|-----------------|----------|
|                                 | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i>  |          |
| Butt staves, split .....        | 66             | 5½             | 3               | \$583.98 |
|                                 | 66             | 5½             | 2½              | 510.98   |
|                                 | 60             | 5½             | 2               | 437.99   |
| Pipe staves, split .....        | 60             | 5              | 1½              | 350.30   |
|                                 | 54             | 5              | 1½-1¼           | 206.82   |
| Dressed (flat or circled) ..... | 44             | 4½-5           | 1½              | 128.53   |
|                                 | 42             | 4½-5           | 1½              | 116.80   |
|                                 | 40             | 4½-5           | 1               | 97.33    |
|                                 | 38             | 4½-5           | 1               | 90.03    |
|                                 | 38             | 4½-5           | 1               | 82.73    |
|                                 | 36             | 4½-5           | 1               | 75.43    |
|                                 | 34             | 4½-5           | 1½              | 87.60    |
|                                 | 34             | 4½-5           | 1               | 73.00    |
|                                 | 34             | 4½-5           | ¾               | 68.13    |
|                                 | 26             | 4½-5           | 1½              | 63.26    |
|                                 | 26             | 4½-5           | ¾               | 48.67    |
| Dressed (heading, flat) .....   | 24             | 5-6            | 1½              | 58.40    |
|                                 | 22             | 5-6            | 1½              | 53.53    |
|                                 | 20             | 5-6            | 1               | 48.67    |
|                                 | 18             | 5-6            | ¾               | 43.80    |

Of the foregoing sizes, those in greatest demand are 38 inches by 4½

to 5 inches by 1 inch and 34 inches by  $4\frac{1}{2}$  to 5 inches by 1 inch. In these two sizes are comprised about half of all the American staves imported. At present, the demand for the latter size exceeds the supply. Otherwise stocks are good. The prices of American staves have been advancing for a year or so past.

Owing to scarcity and increasing use, prices of Baltic staves have been rising for some time. In the twelve months ended the 15th of May last, they varied from £180 (\$875.97) to £220 (\$1,070.63) per mille (1,200) of full-sized pipe staves. Since the 15th of May the prices have still further advanced, the current prices being about £230 (\$1,119.30) per mille of "Crown" (first quality) staves of this size and £200 (\$973.30) per mille of the only other quality brought here ("first Brack"). Shippers as a rule insist upon a certain percentage (say 20 per cent) of "first Brack" staves being bought with every purchase of "Crown" staves, although the two qualities are invariably made up in separate parcels. All of the Baltic staves imported are hand dressed, being squared, hewn, and planed.

A full-sized Baltic pipe stave measures 6 feet by 6 inches by 3 inches, or thereabout. The price of a mille of such staves, ranging in weight from 23 to 28 British tons, is the basis upon which the prices of the various other sizes of Baltic staves are computed throughout the trade. Thus the prices per mille of this unit stave, "Crown" quality and "first Brack," are all that are quoted in the market for these staves. Given the price per mille of full-sized pipe staves of either of the two qualities, by a simple calculation one can readily arrive at the price of any of the smaller sizes of staves by consulting the following standard computation table, prepared by the Baltic shippers, which gives all the sizes ordinarily imported, and shows their relative prices as compared with that of the unit stave. For example, the table shows that full-sized (i. e., 6 inches by 3 inches) long-heading staves are one-third of the price of full-sized pipe staves, while " $6\frac{1}{4}$ " (3 inches by  $1\frac{1}{4}$  inches) long-heading staves are  $\frac{1}{8}$  the price. In the table all the lengths given are minimums; the width and thickness in each column are also minimums, excepting in the "full-sized" column, in which they are averages:

Computation table.

| Designations and minimum lengths.  | Widths and thicknesses.               |   |  |                           |  |  |                                  |
|------------------------------------|---------------------------------------|---|--|---------------------------|--|--|----------------------------------|
|                                    | Averages, full sized (6 by 3 inches). | Minimums.                               |  |                           |  |  |                                  |
|                                    |                                       | 10/4 inch (5 by $2\frac{1}{4}$ inches). | 9/4 inch (4 by $2\frac{1}{4}$ inches). | 8/4 inch (4 by 2 inches). | 7/4 inch (3 by $1\frac{1}{4}$ inches). | 6/4 inch (3 by $1\frac{1}{4}$ inches). | 5/4 to 4/4 inch (2 by 1 inches). |
| Pipe (72 inches).....              | 1                                     | 10                                      | 9                                      | 8                         | 7                                      | 6                                      | 5                                |
| Brandy (58 inches).....            |                                       | 10                                      | 9                                      | 8                         | 7                                      | 6                                      | 5                                |
| Hogshead (48 inches).....          |                                       | 10                                      | 9                                      | 8                         | 7                                      | 6                                      | 5                                |
| Long barrel (38 inches).....       |                                       | 10                                      | 9                                      | 8                         | 7                                      | 6                                      | 5                                |
| Short barrel (32 inches).....      |                                       | 10                                      | 9                                      | 8                         | 7                                      | 6                                      | 5                                |
| Long heading (26 inches).....      |                                       | 10                                      | 9                                      | 8                         | 7                                      | 6                                      | 5                                |
| Short heading (20 inches).....     |                                       | 10                                      | 9                                      | 8                         | 7                                      | 6                                      | 5                                |
| Short heading (17 to 19 inches)... |                                       | 10                                      | 9                                      | 8                         | 7                                      | 6                                      | 5                                |

Baltic staves are uniform in quality. They are separately inspected before shipment, by sworn municipal officers called "brackers." There are such officers at all the principal stave ports. It is their duty to verify the dimensions of all staves before shipment, also to carefully select the faultless ones from the others, and to stamp one end of each with a crown, denoting that it is of the first quality. The remaining staves are marked in other ways. They are classed in separate groups, according to quality, as "first brack," "second brack," etc., and are placed apart from the "crown" staves. The brackers' mark is considered a semiofficial guaranty both as to size and quality.

While all sizes of Baltic staves mentioned in the above table are imported here to a greater or less extent, the chief sizes brought are full-sized, long barrel staves, measuring one-half the size of a pipe stave, or, roughly, 38 to 44 inches long, by 6 by 3 inches, and "8/4" (i. e., 2-inch) barrel staves of the same length, but only 4 inches wide and 2 inches thick. According to an estimate made for me, not less than one-third of the total quantity of Baltic staves imported is represented by these two sizes. Of course, a considerable quantity of heading staves (chiefly full-sized and "10/4") is also required.

Probably, more than four-fifths of the product of the breweries in this district are put up in one or the other of the following five sizes of barrels, etc., viz: butts, hogsheads, barrels, kilderkins, and firkins.

By the manager of an extensive Edinburgh cooperage works—perhaps the largest in Scotland—I was told that fully nine-tenths of the staves used by the firm are Baltic oak. At a less important cooperage I was informed that the proportion of Baltic staves used by them is fully as great, and also that the cost of such staves used annually is about £20,000 (\$97,330). Each of these firms uses a small quantity of American and Canadian white oak staves for filling orders for casks for stout and, more rarely, for whisky barrels. One of my informants just mentioned said: "The few American staves which we use are 38 by 4½ to 5 inches by 1 inch, circled or flat."

Baltic staves are principally shipped to this district from Memel and Libau. Memel is the chief port, but Libau is gaining in importance in the stave trade. Among the other shipping ports are Dantzic, St. Petersburg, Stettin, and Odessa. There are only four prominent shippers.

Apart from their high price, Baltic oak staves could not well compete, so far as the whisky trade is concerned, with those made from American white oak, as, the nature of the Baltic oak being more porous, there would be an appreciable percentage of loss of such a "searching" liquid as whisky placed in it, and with the rate of excise duty on whisky any waste is a matter much more serious than it would be in regard to beer, which in any case does not find its way through the pores of the wood so readily, and soon tends to clog the pores more or less.

## OUTLOOK FOR AMERICAN STAVES.

As to the condition in which American staves should be delivered in this district, I beg to offer the following remarks and suggestions based on information gathered from various sources:

The demand now is entirely for dressed staves, flat or circled, and no rough stock should be sent, except in the case of butt and wine pipe sizes— $5\frac{1}{2}$ , 5, and  $4\frac{1}{2}$  feet. In recent years the stave trade has undergone a complete change. Formerly American staves were sent in a very rough condition, being merely split, but now staves are coming either flat or circle dressed to the length required by the coopers.

The staves to be used for whisky coopering require to be of the best quality.

Cull staves should only be sent against definite orders.

One serious obstacle to the development of the American stave trade in Scotland is the disposition on the part of shippers to send staves without due regard to whether they are suitable to the requirements of the market.

To quote the words of a prominent Glasgow stave merchant who does a large trade in American staves in Glasgow, in addition to supplying such staves to coopers in Edinburgh and Leith, and who is the only merchant importing American staves direct to Leith:

The trade can only be developed through a responsible agent well versed in the requirements of the Scottish markets, who can guide shippers to what is required and explain how distribution should be made as to port of discharge and as regards quantities and sizes.

This merchant last year imported to Scotland 800 "running" mille (1,760,000) American staves, chiefly to the port of Glasgow, but a small quantity, destined for his customers in Edinburgh and Leith, came by steamer direct to Leith. His opinion of this market is that it is a limited one, "and one that requires to be very carefully handled," but he says "there is no doubt that business can be developed in special sizes of dressed staves." He adds:

The dock commissioners of Leith show no regard for development of business in staves and lumber from America. The result of the mode of operation is to cause excessive handling expenses. Further, no shed accommodation is provided for such goods discharged from vessels. All shipments are left unsheltered, and in the case of dressed staves or manufactured lumber the commissioners have no care as to whether or not the weather may damage or destroy the goods. The chances of a percentage of loss in staves at Leith are considerable, and for many reasons this port is only suitable for specific orders booked to arrive. Glasgow is a much larger distributing port, with better facilities for handling and developing this trade.

On the other hand, the manager of the one important whisky cooperage in this vicinity considers the cost of carriage from Glasgow, amounting to 8s. 11d. (\$2.16) per British ton (Glasgow cartage, 30

cents; rail to Leith, \$1.66; Leith cartage, 20 cents), a serious drawback which should be obviated, where at all possible, by direct shipments. In a conversation with me he said:

An endeavor should be made to ship staves destined for use in this particular neighborhood direct to Leith and not via Glasgow. The great bulk of American staves at present used in this locality arrives by way of Glasgow. This entails a heavy carriage to Edinburgh and Leith. In recent years, there have been very few direct shipments of American staves to the port of Leith.

The ocean freight rates on small consignments of staves forming part of a general cargo are often very low, as the staves answer as dunnage for the remainder of the cargo, and are used for this purpose.

Regarding the state in which American staves reach this market, the gentleman last mentioned offered the following criticisms:

We think shippers' attention should be drawn to the large proportion of staves of inferior quality—for example, riddled with worm holes, badly dressed, or marred by strains, etc.—in parcels sold by them as first class. Many of these staves could easily be detected by makers and shippers, and they should be rigidly excluded from parcels purporting to be "first class." The coopers can not put such staves in their casks, and accordingly they have to bear the loss. A considerable percentage of the larger sizes of rough staves arrives in a badly split condition. This state of affairs should be at once remedied.

Baltic staves are, it seems, occasionally discovered which are "porous" in a manner peculiar to the variety, but apart from the system under which they are inspected and selected they are naturally much freer from ordinary worm holes than are those made of American oak, and they never have the minute insect holes known here as "seed holes," resembling crosswise pores, by which American staves are sometimes marred. I understand that while the larger worm holes are always noticed when the staves are being prepared by the coopers, and may often be plugged, occasionally "seed holes" are not observed in making up barrels, and the faulty staves are only detected by their "sweating" when the hot-water or the steam-pressure test is applied to the barrel. Under the agreement between masters of Scottish cooperages and their employees, a workman is held responsible for placing a faulty stave in a barrel, and, unless the fault is of a nature which might reasonably have escaped the notice of an ordinarily careful person, he must "shift" the stave at a nominal charge of 4d. (8 cents) for his work, or at a loss of half an hour's pay, at his option, the employer furnishing the stave to be substituted. By a recent ruling in connection with a dispute here, this agreement was held to apply to staves damaged by "seed holes" equally with those rendered unfit by ordinary worm holes, etc.

The shore dues charged by the Leith dock commissioners on oak and brick staves amount to 8d. (16 cents) per ton of 48 cubic feet, caliper measure, or 1d. per 6 cubic feet.

RUFUS FLEMING, *Consul*.

EDINBURGH, *November 17, 1899.*

## LIVERPOOL.

## IMPORTS.

It is difficult to give an approximation of the number of staves used in the Liverpool market, as some of those imported are sold on the basis of St. Petersburg standard of 165 cubic feet, while others are sold in bundles called "shooks," each shook containing a quantity sufficient to make a cask, and others again are sold by the mille of 1,200 pieces; but the annual value of the staves used here is estimated at between \$1,215,000 to \$1,458,000. The largest percentage of oak staves used in this market comes from the United States, the annual importations therefrom being about 4,200,000, valued at from \$413,100 to \$486,000.

## KIND IN GREATEST DEMAND.

The kinds in greatest demand here are those made from oak, elm, and fir timber. Staves for hogsheads, suitable for palm-oil casks, are in great demand in the following sizes: 44 to 46 inches long, 1 inch to 1½ inches thick, and 4 to 6 inches wide. Staves in green and dry condition are in demand for a variety of uses, but generally there is more demand for the dry stock. Formerly, there was considerable objection made by coopers in this country to dressed staves, but such staves are now coming more into favor.

Preference is given to oak staves which have been riven from timber reasonably free from defects, which has been felled in the winter or at a time when the sap is most inactive. Elm and fir staves should be cut from reasonably free timber.

## SOURCES OF SUPPLY.

The sources of supply are: Oak staves, chiefly from the United States, but supplies are also received from Russia and Austria; elm staves, from Canada; fir staves, from Norway and Sweden.

## PRICES.

The cost to the consumers of oak staves is from as low as \$48.66 to as high as \$1,215 per 1,200 pieces, according to size, quality, and point of production. Of elm staves, the cost is \$7.29 to \$12.16 per 1,200 pieces, and fir staves, \$21.74 to \$26.60 per St. Petersburg standard of 165 cubic feet.

The following quotations are the present wholesale prices per mille (1,200 pieces):

From New Orleans:

|                                   |                    |
|-----------------------------------|--------------------|
| Canada butts, 66 inches long..... | \$364.98- \$463.31 |
| Double, extra heavy .....         | 267.65- 316.32     |
| Wine pipe, extra heavy.....       | 206.82- 243.32     |
| Hogshead, extra heavy.....        | 145.99- 170.32     |
| Barrel, extra heavy.....          | 85.16- 116.79      |

**From Boston, New York, and Philadelphia:**

|                              |                   |
|------------------------------|-------------------|
| Extra heavy pipe.....        | \$131.66—\$172.75 |
| Heavy pipe.....              | 97.88— 121.66     |
| W. O. W. I. hogshead.....    | 107.06— 111.92    |
| Second quality hogshead..... | 72.99— 82.73      |
| Culls.....                   | 48.66— 53.39      |
| Barrels.....                 | 88.98— 68.13      |

**From Baltimore, Norfolk, etc.:**

|                |               |
|----------------|---------------|
| Wine pipe..... | 92.46— 102.19 |
| Hogshead.....  | 53.58— 72.99  |
| Barrel.....    | 34.06— 88.98  |

**Oak staves:**

|                          |                |
|--------------------------|----------------|
| Dantzic, crown pipe..... | 924.63— 973.80 |
| Libau, Memel.....        | 875.97— 973.80 |
| Bosnian, barrel.....     | 97.83— 121.66  |

**DIMENSIONS.**

Staves of the following dimensions are in demand: Butts, 5½ feet long, 1½ to 3 inches thick, and 5 inches and upward wide; pipes, 5 feet long, 1½ inches and upward thick, and 4½ inches and upward wide; wine pipe, 4½ feet long, 1½ inches and upward thick, and 4½ inches and upward wide; hogsheads, 4 feet long, 1½ inches and upward thick, and 4½ inches and upward wide; W. O. W. I., 44 to 46 inches long, 1 inch thick, and 4½ inches and upward wide; extra barrels, 3 feet long, 1½ inches thick, and 4½ inches and upward wide; claret barrels, 37 to 40 inches long, 1½ inches thick, and 4½ inches and upward wide; heading, 30 inches and under long, 1 inch thick, and 4½ inches and upward wide.

**SUPPLY AND DEMAND.**

The supply of nearly all classes is at present about equal to the demand, but there is a scarcity in the supply of elm staves, the result being that consumers are driven to use fir staves instead. The demand, on the whole, is at present very good, and the prospects for consignments are encouraging.

**AMERICAN VS. RUSSIAN STAVES.**

I am informed that the oak staves used in most English breweries are obtained from Russia, and at a price considerably in advance of that paid for United States staves. The reason given for the preference of Russian staves is that they are said to be freer than American staves from tannin, which affects the color and taste of the beer.

JAMES BOYLE, *Consul.*

LIVERPOOL, *October 20, 1899.*

## NEWCASTLE-UPON-TYNE.

## IMPORTS.

The following was the number of loads of staves (50 cubic feet each load) imported into the Tyne during 1898: Coastwise, 73; Norway, 694; France, 246; Sweden, 798; Russia, 3,315; Denmark and Iceland, 26.

## KINDS IN GREATEST DEMAND.

The kinds of staves in greatest demand are red and white wood for chemical casks on the Tyne, and oak staves for beer casks at West Hartlepool.

## SOURCES OF SUPPLY AND PRICES.

For Tyne use, red and white wood imported from Russia (Finland), Sweden, and Norway—Swedish best—cost £8 per standard of 165 cubic feet (40s. or \$9.73 per 1,000 superficial feet one-half inch, and 50s. or \$12.17 per 1,000 superficial feet five-eighths inch), well cut. The standard equals about 4,000 feet one-half inch. Oak staves for West Hartlepool (shipped at Memel and Libau in the Baltic, the source of supply being chiefly Poland), £150 to £230 (\$730 to \$1,119) per mille (1,200 pieces) of full-sized pipe staves 6 feet by 6 inches by 3 inches. This size is given in the rough. They are afterwards cut in two and split, making four staves.

## DIMENSIONS.

The sizes used in Tyne, red and white wood, are 21 inches by three-eighths inch; 26, 28, 30, 32, 34, 36, and 38 inches by one-half inch; 40 and 42 inches by five-eighths inch. Sizes used at West Hartlepool: Pipe staves, 6 feet by 6 inches by 3 inches.

## REQUIREMENTS.

Staves should be well seasoned, dry, well cut, and of good size. They are usually stowed to best possible advantage in small vessels, 60 to 70 standards (9,900 to 11,550 cubic feet), most suitable for Tyne.

For Tyne use, the timber most desired is red and white wood, the proportion of red wood being about 80 per cent; must be free from loose or black knots, and well manufactured to the sizes.

## SUPPLY AND DEMAND.

The chemical companies on the Tyne use about 1,000 standards (165,000 cubic feet) in twelve months. There is a steady demand at Hartlepool.

## AMERICAN STAVES.

The following are the quantities of staves imported from the United States into the Tyne during the last five years: 1894, 175 loads; 1895, 53 loads; 1896, 9 loads; 1897, 25 loads; 1898, none.

About twenty-five to thirty years ago some American whitewood staves were imported into Hartlepool, but they did not find much favor. They were small in size and inferior in quality and only fit to make buckets, etc.

HORACE W. METCALF, *Consul*.

NEWCASTLE-ON-TYNE, *November 13, 1899.*

## AFRICA.

## CAPE COLONY.

The number and value of staves used in 1898, the date of the latest compilation, were as follows:

| From—                | Number.    | Value.       |
|----------------------|------------|--------------|
| United Kingdom ..... | 12, 100    | \$7, 329. 00 |
| United States .....  | 263, 527   | 28, 420. 33  |
| Germany .....        | Not given. | 545. 05      |
| Sweden .....         | do .....   | 1, 211. 76   |

The kinds of staves in demand are hogshead staves dressed and a limited quantity of extra double heavy pipe staves.

The sources of supply are noted above.

In order to command the best prices and to give satisfaction, staves should be delivered as dry as possible and well seasoned.

Dimensions of staves most called for are: Hogshead staves, known as "West India," should not be less than 44 inches long and 1 inch thick at thinnest edge; pipe staves, 57 inches long and 2½ inches wide; hogshead staves, undressed, 46 inches long, 6 inches wide, and 1½ inches thick.

Prices: Pipe staves, in August, \$311.45 per mille (1,200 pieces); hogshead staves, dressed, \$155.48; undressed, \$165.45, per mille.

The timber most desirable is white oak principally, straight grained; no "red staves" are in demand.

The market for staves in South Africa is limited, for the reason that barrels and kegs are made for wine only, and the great bulk of the wine produced is bottled. The United States, as will be seen above, has the bulk of the trade and will continue to hold it. As the demand will not increase for some years, no decided action to extend the trade is advised.

J. G. STOWE.

CAPE TOWN, *November 8, 1899.*

*Addenda.*—Five-pipe staves 4 feet 9 inches long, 2½ inches wide; hogshead, undressed, 3 feet 10 inches long, 6 inches wide, 1½ inches thick. Cost: Pipe staves, \$311.45 per mille, delivered (August); hogshead staves, dressed, \$155.48 per mille, delivered (August); hogshead staves, undressed, \$165.45 per mille, delivered (August).

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### EGYPT.

Under date of November 23, 1899, Vice-Consul-General Hunter reports that no staves are imported into that country. There are large imports of wines and oils into Egypt, and the empty casks supply all requirements.

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### MADAGASCAR.

Consul Gibbs reports from Tamatave, November 18, 1899, that there is absolutely no demand for staves, and that there are at all times during the year thousands of empty wine barrels, the staves of which are used to construct fences, the only employment for staves in his district.

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### MADEIRA.

#### IMPORTS.

The number of staves imported for 1898, as shown by the customs books, was 233,898, value \$23,527. All staves imported to this island are from the United States. Quite a number brought from the United States to Liverpool as dunnage find their way here; the kinds of staves in greatest demand are pipe, hogshead, and barrel.

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#### PRICES AND DIMENSIONS.

The prices of staves, f. i. c., in Funchal Bay, have been as follows, per 1,250 pieces: Pipe, \$200 to \$250; hogshead, \$150 to \$180; barrel, \$110 to \$135.

These were the average prices up to the end of 1898. The prices in 1899 have risen considerably, pipe staves having gone to \$300 to \$350 and even higher.

Staves should be delivered as dry as possible in order to command the best prices and to give the most satisfaction.

Dimensions of the staves in use are: Pipe, 140 by 13 centimeters (55.32 by 5.12 inches); hogshead, 115 by 13 centimeters (45.28 by 5.12 inches); barrel, 85 by 13 centimeters (33.49 by 5.12 inches).

Values range according to thickness. They are shipped, as a rule,

in three qualities—thin, heavy, and extra heavy. The extra heavy are, as a rule, the most salable.

White-oak timber is the most desirable for the particular kind of stave used.

#### SUPPLY AND DEMAND.

The demand is in proportion to the quantity of wine produced and exported. The present yearly shipments are about 6,000 pipes of 110 Winchester gallons.

#### AMERICAN v. RUSSIAN STAVES.

In consequence of the very high prices which American white-oak staves have obtained this year, wine growers and shippers are looking to other countries for their future supplies, especially as in the mother country (Portugal) Baltic staves are extensively used and are liked.

While Russian staves are suitable for Portuguese and French wines, i. e., port wine, claret, brandy, etc., they are not suitable for Madeira casks. The Russian staves are much shorter and the casks are entirely different, the Madeira casks being longer and less in circumference. But if orders go to Russia, the staves can and will be changed.

Russian staves, as quoted to merchants here, are higher than American staves.

Pipe staves imported from New York, and called here "New York staves," are 14 inches long, which is the proper length.

New Orleans pipe staves are 10 inches longer, and the 10 inches are a dead loss.

T. C. JONES, *Consul*.

FUNCHAL, *October 16, 1899.*

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#### MAURITIUS.

There is no demand for any of the articles named in the circular. All the casks used here for the export of rum, molasses, and oil are secondhand. Many of them have been used several times, and most of them are made of secondhand shooks sent here from India by the users or exporters, and made over to suit the size of the package required.

There are several small cooperage establishments in Port Louis—all of them very primitive concerns. Practically, there is not a new cask made in these yards from one year's end to another.

Whenever, for any special purpose, new casks are required, teak wood imported from the Straits Settlements is employed.

JOHN P. CAMPBELL, *Consul*.

PORT LOUIS, *December 26, 1899.*

## PORTUGUESE EAST AFRICA.

Under date of Lourenço Marquez, December 6, 1899, Consul Hollis reports that there is no demand for either staves or new barrels in his consulate, the barrel market being always amply supplied with empty Portuguese wine barrels.

## SIERRA LEONE.

There is no demand for staves at present in this consular district. The state of manufacturing here is so limited as to require but few casks or barrels, and these are supplied, for the most part, to dealers in palm oil. Aside from a few returned shooks from England, empty rum casks are largely utilized for the purpose. Coopering, as a business, is almost entirely limited to repairing these for use. I have no doubt in a few years there will be progress in this branch of industry, but at present there is nothing to justify our exporters of staves giving attention to this market.

JOHN T. WILLIAMS, *Consul.*

SIERRA LEONE, *January 6, 1900.*

## AMERICA.

## DOMINION OF CANADA.

## BRITISH COLUMBIA.

There are but 4 cooper shops in this district, or on Vancouver Island, viz, 1 at Nanaimo and 3 at Victoria. The manufacture of barrels is almost entirely limited to those used for the storage and transportation of beer, salmon, and sealskins, and the last two when packed are sent direct from this port to England and the European Continent. The island fir wood is almost entirely used, and the staves made and the barrels constructed therefrom give excellent satisfaction. The entire number of cooper shops on the island give employment to only 6 men, and these quite irregularly. The total output of barrels on the island does not amount to 10,000 annually, nor does the value equal \$20,000.

About 15,000 staves are used, of the value of \$600; they are principally spruce and fir; a few oak.

The fir staves are almost entirely bought here, and are a product of the island. They cost about 35 cents per set. Others are imported, principally from San Francisco, and cost 47 cents per set.

Staves are desired to be seasoned and undressed, 18 to 34 inches, and 5 to 6 feet long. A small number of pipe staves are desired, 7 feet long.

The dimensions of staves used vary greatly, from 1 to 7 feet in length and 4 to 34 inches in width.

Oak, fir, and spruce are the woods most desirable.

The supply of fir on the island is practically unlimited. Oak and spruce are generally imported.

About one-half the staves used are imported from the United States.

The Victoria Brewery and the wholesale grocers import barrels from the eastern provinces to a large extent. The stave trade here is quite small, the only demand being from the 4 small cooper shops mentioned, whose aggregate business is limited.

ABRAHAM E. SMITH, *Consul*.

VICTORIA, *October 17, 1899.*

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### MANITOBA.

Consul Graham, of Winnipeg, November 29, 1899, reports that there is no trade whatever in staves in Manitoba. No barrels are made, and none are used except such as are brought into the district filled. The product of the extensive flouring mills of the district is put up in sacks exclusively.

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### NEW BRUNSWICK.

Consul Myers, of St. John, under date of September 28, 1899, reports that fish is the principal product shipped in barrels and kegs from his district, and these are made from native timber. The hardwood casks and barrels used are manufactured from second-hand barrels imported with their contents, of which the supply is always greater than the demand.

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### NEWFOUNDLAND.<sup>1</sup>

#### IMPORTS.

All the staves imported into Newfoundland come from the United States and Canada. The approximate estimate of the number of staves is 50,000 per annum.

#### STAVES IN GREATEST DEMAND.

The staves in greatest demand are the elm staves of the United States, which had been used almost exclusively for dry fish packages until quite recently, when the Government put a prohibitory duty of

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<sup>1</sup> Newfoundland, although not in the Dominion of Canada, is placed here for convenience of record.

\$5 per hundred on dressed staves. Native birch, spruce, and fir staves are now being used for fish drums; staves measuring 21 by 4 by  $\frac{3}{4}$  command \$4 per hundred. Rough oak staves of the United States are preferred to those of Canada and can be bought at the same price.

#### OUTLOOK FOR AMERICAN STAVES.

Staves to command the best prices should be dressed and jointed, but the new tariff is more than the trade can stand. Timber direct from the cleaver and saw is now being imported from the United States. The duty on timber in the rough is 5 per cent, while on dressed staves the duty is, as above stated, \$5 per hundred.

The only timber in Newfoundland from which staves are made is birch, spruce, and fir. The United States elm and oak staves are what the trade prefers, the native staves made from birch, spruce, and fir being undesirable for drums in which fish is shipped to warm countries. Nearly all the staves of used flour barrels are again dressed and made into fish drums; these are much superior to those made from native timber.

As long as the present duty on dressed staves exists, there is no hope of increasing the exportation of the United States staves in this market. With the duty removed, the United States would again have the bulk of the Newfoundland stave trade.

MARTIN J. CARTER, *Consul*.

ST. JOHNS, *October 28, 1899.*

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#### ONTARIO.

##### CHATHAM.

#### PRODUCTION AND CONSUMPTION.

There were manufactured within this consular district during the year ended June 30, 1899, some 30,000,000 staves, valued at \$135,000. The same were disposed of in the following manner: Exported to the United States, 20,000,000 staves, and used within the district, 10,000,000.

#### STAVES IN GREATEST DEMAND.

Those in greatest demand are for flour, apple, and cement barrels.

The source of supply is timber cut within the bounds of this consular district. The cost to the consumer per 1,000, gross, is: flour-barrel staves, \$5.25 and \$5.50; apple-barrel staves, \$4; cement-barrel staves, \$3.75.

There is no importation of staves into this district nor any demand for foreign staves.

## DIMENSIONS.

The sizes of staves used and manufactured in this district are, for cement barrels  $28\frac{1}{2}$  inches, and for flour and apple,  $28\frac{1}{2}$  and 30 inches. Nine-tenths of all the staves manufactured in this district are elm.

## SUPPLY AND DEMAND.

For local use the supply exceeds the demand, but for the export trade the supply of timber will not last longer than five years, at which date the remaining timber will be scattered and not in sufficient quantities to warrant keeping up or running the large plants, the cost of hauling logs being too great. The remaining timber will doubtless be sufficient for local demands. Already, owners of plants doing export business are looking for new fields in the United States in which to operate.

Comparatively speaking, there is no "white oak" in this section, and little or no demand for white-oak staves.

CHAS. E. MONTEITH, *Consul.*

CHATHAM, *November 14, 1899.*

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HAMILTON.

## IMPORTS AND EXPORTS.

It is impossible to obtain even an approximate estimate of the number and value of staves used in this district in the manufacture of apple and flour barrels, as none are imported. The exportation of elm staves to Europe and the United States is made from various points and in all-sized lots, while the home consumption is large, on account of fruit shipments; but price and transportation leave little opportunity for American competition in this line of staves. White-oak staves to the number of 138,000 were imported at this point, free of duty, from the United States, during the year ended June 30, 1899, for the manufacture of pork, whisky, and vinegar barrels, and churns. The Province of Ontario imported from the United States, in the year ended June 30, 1898, staves valued at \$24,973, which was a trifle over 7 per cent of the amount of exports of staves and heading to the United States.

## PRICES.

Staves for pork barrels bring \$22 per 1,000; for whisky and vinegar barrels \$30 to \$32, and for churns according to dimensions. Elm staves are produced here at \$6.50 to \$7 for flour barrels, \$5 to \$6 for apple barrels; hoops \$7 per 1,000, and heading 4 to  $4\frac{1}{2}$  cents per set.

## DIMENSIONS.

Pork staves are 30 inches by  $\frac{5}{8}$  inch; whisky and vinegar, 34 by  $\frac{3}{4}$ ; churns, 18 $\frac{1}{2}$  by 4 by  $\frac{5}{8}$ , 20 $\frac{1}{2}$  by 4 by  $\frac{5}{8}$ , 22 by 4 by  $\frac{5}{8}$ , and 25 by 4 by  $\frac{5}{8}$ ; all are required to be of seasoned white-oak.

## AMERICAN STAVES.

White-oak staves alone seem to be in demand for the United States. All oak staves used here come from points within the United States—West Virginia, Arkansas, Kentucky, Ohio, Indiana, and Michigan. No other staves are imported.

There is no complaint of lack of supply or of facilities for transportation, and the demand is reported to be increasing.

JAS. M. SHEPARD, *Consul*.

HAMILTON, *October 12, 1899.*

## PRINCE EDWARD ISLAND.

The number of staves used is about 300,000, at an average cost of \$8 per 1,000.

The kinds of staves in greatest demand are clear spruce; oak is used to a small extent.

The source of supply is New Brunswick.

Staves should be clear wood, thoroughly seasoned, planed on two sides, and jointed; length, 28 inches; width, 3 $\frac{1}{4}$  inches; thickness, five-eighths inch.

The condition of supply and demand is fair.

No American staves are sold in Prince Edward Island.

DELMAR J. VAIL, *Consul*.

CHARLOTTETOWN, *September 28, 1899.*

## QUEBEC.

Consul Henry reports that there are but two cooper shops in Quebec, which use about a carload each, per year, of oak staves that come from Ontario.

## MEXICO.

Consul Viosca, of La Paz, October 6, 1899, reports that there is no demand for staves in his consular district.

## CENTRAL AMERICA.

Consul Caldwell, of San José, Costa Rica; Consul Johnston, of Utila, Honduras, and Consul Donaldson, of Managua, Nicaragua, report that no staves of any kind are imported into those Republics, nor are any packages made therein from staves, save such as may be made over from imported barrels emptied of their contents—flour, sugar, oil, etc.

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SALVADOR.

Salvador has no cooperage establishment or business where the oak stave or any other wood is employed. The demand for barrels is amply supplied by the empty ones that have been used in the importation of wines and liquors, together with the iron tanks containing oils for the manufacture of soaps and paints.

There is but one brewery in Salvador, the "Cerveceria National," located at San Salvador, whose trade is purely local, requiring but very few kegs.

The exports of Salvador are chiefly dry products easily packed in bags. Sugar is one of those products, and the molasses is converted into alcohol, which is packed in carboys and old barrels.

I have failed to find a case of importation of oak staves or any other wood into Salvador.

JOHN JENKINS, *Consul.*

SAN SALVADOR, *November 1, 1899.*

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SOUTH AMERICA.

## ARGENTINE REPUBLIC.

## IMPORTS AND CONSUMPTION.

The Argentine Republic is in a very unfavorable condition in the matter of cooperage. There is no oak timber in this country, and up to date no timber has been found suitable for making staves. Therefore the people have from time immemorial resorted to all sorts of expedients to meet the requirements in this respect.

In the city of Buenos Ayres, empty barrels received with wine, liquors, sugar, etc., have been made use of to supply the limited demands of the few manufacturing establishments, and the local coopers have built up considerable trade. In the interior, where old barrels are not so regularly procured, flour, sugar, grain, etc., cotton bags and hempen sacks are employed. Since the manufactories, however, have increased and railways have been extended into the interior, wine casks have been imported, though not in quantities sufficient to warrant the demand.

Distilleries and breweries have been established at various points; their vats, tubs, and barrels being imported from abroad. The growing industries have during the past few years greatly increased the demand for foreign barrel staves, of which the largest part comes from the United States. In 1884, as appears by the custom-house returns, the importation of shooks and casks amounted to only \$7,832. In 1889 it amounted to \$50,142. In 1897 the total value of imported barrels and staves amounted to \$166,608, and in 1898 the total value of barrel staves and barrels and casks imported was as follows, viz:

|                      |          |
|----------------------|----------|
| Germany .....        | \$10,649 |
| West Indies .....    | 4,478    |
| Belgium .....        | 6,863    |
| Brazil .....         | 8,412    |
| Spain .....          | 1,009    |
| United States .....  | 78,859   |
| France .....         | 95       |
| Italy .....          | 5,935    |
| Paraguay .....       | 200      |
| United Kingdom ..... | 10,064   |
| Uruguay .....        | 3,142    |
| Total .....          | 129,706  |

Of the total amount above stated, \$59,127 worth was imported into this city (Buenos Ayres), \$2,904 worth into the port of La Plata, \$57,155 into Rosario, and into other ports \$10,520. The above figures show that the imports in 1897 amounted to \$166,608, while in 1898 they were \$36,902 less than in 1897. The reason therefor is simply that American exporters for two years past, for some reason or other, have not made any effort to sell staves to this country.

#### · STAVES MOST IN DEMAND.

The staves in demand in this country are those made from oak timber and should be in sizes for hogsheads, casks, and barrels. Those for hogsheads should be of red oak, the others of white oak. The dimensions must depend on the specifications sent with the orders. The barrels mostly in use are wine casks and ordinary flour barrels. They should be delivered here in bundles, or shooks, as they are called. It would not be satisfactory to send them loose.

#### OUTLOOK FOR AMERICAN STAVES.

Considering the absence of native woods suitable for cooperage, and there being no duty on barrels, staves, and casks, it is a wonder that the importations are not larger, for it appears, with distilleries, breweries, wine manufacturers, sugar establishments, flour mills, etc., now in the country and yearly increasing, the demand could be greatly extended, as the Argentine Republic can not supply it, and it must be furnished from other countries. With an agent in Buenos

Ayres, whose exclusive business should be the sale of staves and barrels, the United States could furnish all there is needed, for it seems that other countries are also neglecting this branch of the business.

D. MAYER, *Consul*.

BUENOS AYRES, *November 15, 1899.*

### BRITISH GUIANA.

The imports of staves into British Guiana during the year 1898 were as follows:

White oak, No. 1, and headings, 300,000 (1,200 to the thousand), valued at \$65 per 1,000; white oak, No. 2, and headings, 160,000, \$40 per 1,000; red oak, No. 1, 85,000, valued at \$40 per 1,000.

The staves in greatest demand are white and red oak, principally the former.

The source of supply is Norfolk, Va. The cost to the consumer is: White oak, \$75 per 1,000 (1,200); red oak, \$45 per 1,000.

The dimensions of staves in greatest demand are: White oak, No. 1, 44 by 4½ by 1½ inches; white oak, No. 2, 42 by 3½ inches by 1 inch; red oak, No. 1, 44 by 4½ by 1½ inches.

The staves, all American, are used as follows: White oak for making rum packages; red oak for making molasses casks.

The supply is regulated by the requirements of the sugar estates.

The United States holds the whole trade.

GEO. H. MOULTON, *Consul*.

DEMERARA, *October 31, 1899.*

### CHILE.

The fiscal and general policy of Chile is mainly controlled by the landed proprietors, the "Haciendados," who in the last twenty years have given increasing attention to the cultivation of the grape and the manufacture of wines and spirits. The result is that from the Huasco Valley, 28° 34' south latitude, to the province of Concepcion, in 37° south latitude, there are vast numbers of valuable vineyards, well equipped, with excellent plants for the production of wines and spirits.

When, on December 23, 1897, the law known as No. 980 was enacted in order to secure cheap supplies of staves for their business, rough staves were made free of duty, but for dressed staves a duty of 15 per cent on a valuation was assessed, being about 3 cents per kilogram. They wished to have all free, but the labor interests had to be considered.

The products of this province and consular district are entirely mineral, and are exported in stout bags, and some classes in bulk.

For iodine, a by-product of nitrate of soda, strong kegs covered with rawhide when filled are used. These are made in the south.

In 1898, not a stave was imported from abroad or from home ports. There is, therefore, no outlook here for the stave trade.

CHARLES C. GREENE, *Consul*.

ANTOFAGASTA, *November 4, 1899.*

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### ECUADOR.

Consul-General de Leon reports, Guayaquil, October 25, 1899, that no staves are imported into Ecuador, nor is there at present the slightest chance of developing a business in that country, its chief products being all shipped in bags. The few staves used are made in the country for constructing barrels for native liquors and large wooden vats for deposits of alcohol, molasses, etc. Guayaquil imported in 1898, from Peru, barrels valued at \$550.

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### URUGUAY.

There is not now, nor will there be, any considerable demand for American oak staves in this market, for the following reasons: The importations of wine from Italy, Spain, and France are in barrels and pipes of the very best manufacture, very strongly bound with both wood and iron hoops. When the wine is sold, the barrels have a regular and positive value in the market and with the dealers, who carefully look after the business. From this supply the whole demand for barrels and pipes for tallow and oil that arises from the slaughterhouses is met, and the home coopers make from the culls all the smaller packages which the market may need. There is no duty regularly levied on barrel staves—valued at 22 cents the barrel in knockdown shape—but an extra duty of  $7\frac{1}{2}$  per cent, for port purposes, has recently been levied on all importations. The wine barrels sell readily at from \$1.50 to \$2 for the common bound, \$2 and \$3 for pipes, those made of "Spanish" oak, which is American white oak, being deemed of highest value. The empty yerba barrels (made in Brazil, from a class of fine wood like cedar, and of the same weight as the American flour barrel) find the same market, and are all used as they are or in new work. Uruguay produces no barrel stuff, and hence the uses made of all importations in the manner described. As long as there is the present demand for foreign wines, this market will be quite well supplied with all the barrels needed and have some to spare.

The value of all importations of "cascos" in 1895 was \$11,180; in 1896, \$44,170, and in 1897, \$37,709; for 1898 exact data are not obtain-

able at this moment. In 1896 Spain sent to the value of \$20,640, and in 1897, \$26,476.\* At the same time France sent \$500 and \$600 worth, and Italy \$7,778 and \$6,931, respectively. From the United States came \$1,259 and \$100, respectively, for whalers' use. The number can not be given, as only the values are taken at the customs. The imports here named, by years and countries, investigation shows to have been largely for brewery uses and for distillery purposes—in connection with liquor—compounding, and mixing houses; and further, that the material is generally of American origin and of white oak material, which has the highest praise of all coopers as the best material. Beer cooperage comes knocked down and is put up at the establishments.

The staves imported are generally used for new wine casks (barrels and pipes) and for brewery purposes.

The cost of new barrels to the consumer is reported by coopers as follows: Barrels, \$1.50 to \$2; pipes, double that figure.

Staves should be shipped in single barrel bunches, with headings inclosed, and tied so as to guard against the package breaking.

As to dimensions, the sizes are the standard barrel and the pipe size, which every manufacturer knows.

Oak is the most desirable wood used, and "Spanish oak" leads the market. Investigation shows this material to be nothing else than American white oak.

The supply is always equal to demand, for reasons before given.

No American staves have recently been put on the market. Those arriving here have been sent in bond for use of whalers calling here. The large hogsheads sent to Cuba from the States to hold caña find their way here.

Under the conditions named, it will be seen that there is no reasonable hope of an increased demand for American staves in this market. The freight rates by steam vessels also operate against the commodity.

ALBERT W. SWALM, *Consul*.

MONTEVIDEO, *October 28, 1899.*

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## ASIA.

### BRITISH INDIA.

#### BOMBAY.

Consul Fee, October 31, 1899, reports:

The "white ant" of India is especially destructive to white oak and in fact to all wood excepting "teak." Consequently, the only stave used in this country is of teak wood.

In the bazaars, I find perfectly good second-hand barrels made of white oak staves selling for a rupee, or about 33 cents, while a teak wood barrel of equal size sells readily for \$1.65. I give this to illustrate the comparative local value of the two barrels of different wood.

It is my judgment that there is no demand for white oak staves in this market, and, further, that by reason of the climate and the white ants there can be no demand created.

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#### CALCUTTA.

Consul-General Patterson, November 21, 1899, reports that the stave trade of India is so limited as not to be regarded of sufficient importance to be mentioned in the Government reports of the imports of the country. The products of India are nearly all transported in jute bags, and the only barrels or casks used are those that have been imported containing oil, whisky, and other liquids.

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#### CHINA.

Consul-General Goodnow, Shanghai, November 9, 1899, reports that no staves are imported into China, so far as he knows.

Consul Wildman, of Hongkong, November 21, 1899, reports that there are no staves used in that colony, with the exception of those purchased by the Taikoo sugar refinery from Tacoma, which are used for the storage and shipment of sugar. Among the Chinese the place of kegs and barrels is taken by jars made of clay and porcelain, which are 100 per cent cheaper and are fully as serviceable. He doubts very much the possibility of introducing staves into that market for years to come.

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#### DUTCH INDIA.

The stave trade of Dutch India is nil. No staves of any kind are imported, as there are practically no barrels made here.

There is only one product of Java which requires barrels, and that is "arrack," which is made and exported in large quantities, mostly to Holland. The barrels for this are all manufactured in Holland, and are made especially for the spirit, as any ordinary kind of wood would spoil the taste of the arrack. So far as I know, there is no reason why our manufacturers should not supply the Dutch manufacturers with the kind of staves they want.

Concerning the special methods of manufacture of arrack barrels, I can find out nothing of value here, but our consuls in Holland could

doubtless throw some light on the subject. They are made of oak specially prepared.

A few tubs for the purpose of holding palms for decoration are made here. They are all of teak wood, which is cheap, durable, easily procured, and the only wood that resists the ravages of white ants.

As a rule, when anyone wants a tub for a plant, he buys an empty wine cask, saws it in two, and makes two tubs of the pieces.

SIDNEY B. EVERETT, *Consul*.

BATAVIA, *November 16, 1899.*

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### JAPAN.

There is little, if any, market for staves in Japan. No mention is made of them in the list of imports, and until extensive changes are accomplished in business methods here there is no prospect of a demand arising. The manufacture of beer is increasing, but the breweries sell nearly all of their product in bottles. About the only distilleries in the country are confined to manufacturing saki—a liquor made from rice—which is sold in small tubs of special construction, and it is doubtful if staves from abroad would answer in their manufacture. Rice and other grain is usually transported in straw bags. Wheat flour is mostly imported in cotton bags, and there is no sale whatever for flour-barrel staves.

JOHN F. GOWEY,  
*Consul-General*.

YOKOHAMA, *November 17, 1899.*

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### KOREA.

Under date of October 26, 1899, Consul-General Allen, of Seoul, reports that there is absolutely no trade in staves in Korea.

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### PERSIA.

Staves are unknown in Persian trade, and the language of the country contains no distinctive name to express them. The various articles made from them, such as tubs, casks, barrels, etc., form no part of the manufacturing or domestic equipment. For wine making large jars, containing from 350 to 400 bottles each, take the place of the fermenting vats used in European and other countries. It is probably owing to the chemical action of the glazing of the jars on the must, or during the process of fermentation, that Persian wine rarely keeps in a sound condition for more than a few months. It is

a curious instance of the tenacity of ancient methods that, notwithstanding the heavy losses that have to be sustained every year from wine turning sour, wooden fermenting and storing vessels have not yet come into use. This is the more remarkable inasmuch as it is impossible to make the jars air-tight and so prevent the formation of mildew. One objection to the use of stave-made vessels is the extreme dryness of the atmosphere, which rapidly shrinks them and renders them useless.

For transport purposes, where the pack animal is the only means of carriage, they are not well adapted. They can not be made to fit well to the animal's back, and the rough usage they receive at the hands of camel men and muleteers generally produces a leakage and a waste of the contents. It is on this account that the Baku petroleum for all the Persian markets is sent in sheet-iron cases; and even these suffer to a greater or less extent before they reach their destination. The famous Sheeraz wine is exported in flat bottles, and clarified butter, which is largely sent to India and Java, is packed in skins. Within the last four years a considerable increase has taken place in the manufacture of olive oil in the province of Ghilan, of which Reshd is the chief town, and I believe such as is exported to Russia is sent in small casks. Caviare, which is prepared to a very large extent on the south coast of the Caspian, is also packed in casks, but they are all made at and sent from Baku.

Under such circumstances, there does not seem to be at the present time any opening in Persia for trade in American staves. The fact that articles made from them would be much better and more convenient than many now in use does not, until the public sees the necessity for them, justify me in recommending American merchants to test the market.

HERBERT W. BOWEN,  
*Consul-General.*

TEHERAN, *November 2, 1899.*

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#### STRAITS SETTLEMENTS.

Consul-General Moseley reports from Singapore, November 6, 1899, that the trade in staves in the Straits Settlements is so unimportant that it can be described as nil, the hogsheads, barrels, and casks in which beer, spirits, wines, etc., are imported into the colony more than sufficing for the requirements in this line.

The Green Island Cement Company of Hongkong formerly indented for staves from Singapore, but they turned out so badly that it discontinued further orders, and probably now receives its supplies from the United States.

## SYRIA.

Consul Ravndal reports, from Beirut, November 23, 1899, that staves are neither imported into nor used in the Beirut consular district for any purpose whatsoever.

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## AUSTRALASIA.

## NEW SOUTH WALES.

No class of cooperage is carried on very extensively in New South Wales, as there are few industries requiring large use of cooper's products. The chief use of cooperage is in the export of tallow, handling beers, and storing wines. Butter is packed in boxes and not in kits, kegs, or firkins, as in our country.

There is annually exported from New South Wales about \$20,000,000 of tallow, and this furnishes the chief demand for cooper's products. For use in producing this class of cooperage there are "several million" (words of the chief manufacturer) staves cut for use, 4 feet 3 inches long, 3 inches wide, and 1 inch thick, with an average cost price of \$2.25 per hundred, c. i. f. These all come from the American Pacific coast, and are of Oregon pine and are tied in bundles of 10.

There are from 50,000 to 100,000 oak staves imported annually, largely from New York, but chiefly from Germany. These are used in the production of wine and beer casks. White oak is most suitable for this work and the staves must be well seasoned.

The value of these oak staves is 10 to 12 cents per foot "super," and the dimensions are 3 by 6 inches, and 5 feet 6 inches in length.

There are considerable quantities of smaller sizes also imported from Germany and the United States for hogsheads and Canadian butts, handled loose.

The demand for cooperage is gradually increasing, but no large market can be looked for in the near future.

GEO. W. BELL, *Consul*.

SYDNEY, *November 27, 1899.*

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## NEWCASTLE.

In preparing this report I have been assisted by Mr. Robert Clough, of Newcastle, who is and has been for many years the principal cooper of the northern half of New South Wales.

## IMPORTS.

The average number and value of staves used in this district by the Clough steam cooperage for one year are given below. They are

estimated to be about three-fourths of the total used, but do not include New Zealand material. White oak staves, large and small, 26,000, and 14,000 superficial feet of planking, \$7,786.40; 30,000 superficial feet of Oregon boards and 150,000 superficial feet of Oregon pickets, \$4,160.85; total value, \$11,947.25.

The kind of staves used are Canada butts and New Orleans splits; also fine-grained Oregon pine.

Most of the staves are purchased in the London, New York, Sydney, and Melbourne markets, and are from Norway, Austria, Germany, Canada, and the United States, while most of the local material comes from New Zealand. The staves should be delivered undressed and partly dressed. It has been suggested that large wine casks should be made ready to be put up by local coopers, as is done by German shippers.

#### DIMENSIONS.

The dimensions of staves in use are as follows:

| Description.                        | Length. | Width.  | Thickness. |
|-------------------------------------|---------|---------|------------|
|                                     | Inches. | Inches. | Inches.    |
| Canada butts staves .....           | 80      | 6       | 2½         |
| Do .....                            | 72      | 5       | 2          |
| Do .....                            | 66      | 5       | 3          |
| Do .....                            | 66      | 5       | 1½ to 2    |
| Five-foot staves, N.O. extra .....  | 60      | 4½      | 1½         |
| Pipe staves, N.O. extra .....       | 54      | 4       | 1½         |
| Pipe staves, heavy .....            | 54      | 4       | 2          |
| Hogshead staves, double extra ..... | 44      | 4       | 2          |
| West Indies puncheon .....          | 44      | 4       | 1 to 1½    |
| Hogshead staves, light .....        | 40      | 4       | 1 to 1½    |
| Barrel staves, light .....          | 32      | 4       | 1          |
| Do .....                            | 30      | 3½      | 1          |

#### KINDS OF TIMBER DESIRED.

The kinds of timber desired are white oak for wine, spirit, and brewhouse work, and Oregon pine for tallow casks.

#### SUPPLY AND DEMAND.

There is a steady demand for stave material, to be used in making casks for wine and beer and barrels for tallow, pork, and beef. The supply hitherto has been from Germany and the United States, and locally from New Zealand. At present no American oak is used, but Oregon pine pickets and boards are to some extent.

#### OUTLOOK FOR AMERICAN TRADE.

German oak has been used here very largely, and American oak should take its place. In order to build up a good business in the sale of staves, the timber should be first quality, free from sap, worm-holes, veins, and other defects; it should be split, or if sawed, cut on the quarter, and as straight in the grain as possible. Such staves are here called "figured oak." Man-hole doors are used in the wine trade, one in the head, and sometimes bung doors. If casks were made

ready to be "built up" here, our dealers would be able to control a large portion of the cask and barrel trade.

F. W. GODING, *Consul*.

NEWCASTLE, *January 3, 1900.*

### *Supplementary.*

Consul Goding, under date of January 16, 1900, transmits the following statement covering the staves consumed by the Australian Chilling Company, of Aberdeen, in the Newcastle district:

Annual consumption, about 70 sets (2,000 staves); value at Aberdeen, £23 (\$112); purchased in lots of not less than 250 sets. The source of supply is New Zealand. Cost, about 6s. 6d. (\$1.58) per set, including heads, at Aberdeen. Condition in which goods are received: Jointed staves and heads made to cut ready for use, of seasoned timber. Dimensions, 3 feet 9 inches long; 4 feet at widest part, 1 foot thick, of white pine. No American staves are consumed by the company; Oregon staves are unsuitable.

### QUEENSLAND.

In the manufacture of casks here, the timber used is local pine and hard wood and New Zealand pine. They are principally made for holding tallow, the different meat and boiling-down works having cooperages attached, supplying their own wants. The staves are cut to length, pointed, bent, trussed, and crozed by machinery, and finished by hand labor. The sizes used are as follows, viz:

| Length.        | Head.          | Blige.         | Size cask.    |
|----------------|----------------|----------------|---------------|
| <i>Ft. in.</i> | <i>Ft. in.</i> | <i>Inches.</i> |               |
| 3 8            | 2 1            | 4½ to 5        | Thirds.       |
| 3 0            | 2 2½           | 5 to 5½        | Fifths.       |
| 3 0            | 2 5            | 6              | One-half ton. |

JNO. MCD. MORTON,  
*Acting Consular Agent.*

TOWNSVILLE, *January 15, 1900.*

### SOUTH AUSTRALIA.

Imports, about 200,000 staves, valued at \$30,000.

The kinds in greatest demand are single hogshhead, 44 inches by 5 to 6 inches by 1 inch thick, and double hogshhead, 44 inches by 5 to 6 inches by 3 inches thick.

Source of supply, the United States; cost,  $11\frac{1}{2}$  cents each single, and 21 cents each for double hogshhead staves.

To command the best price, staves should be delivered single, machine dressed.

The timber most in demand is white oak.

In addition to above-sized staves, 34 inches by  $4\frac{1}{2}$  to 6 inches by 2 inches extra barrel staves are sometimes asked for.

CHAS. A. MURPHY,  
*Consular Agent.*

ADELAIDE, *December 23, 1899.*

### VICTORIA.

The following table of the imports of staves into the colony of Victoria during the year 1898 shows that the United States already commands the market here in white oak:

#### *Imports of staves 1898.*

| From—               |         |
|---------------------|---------|
| United States ..... | 378,300 |
| Tasmania .....      | 17,900  |
| England .....       | 10,500  |
| Germany .....       | 3,700   |
| Belgium .....       | 1,200   |
| Total .....         | 411,600 |

The staves imported from Tasmania are of blackwood and are used in the manufacture of casks for fat and other oily substances.

Practically only white-oak staves are needed by the colony, as blackwood and other suitable woods are plentiful here. White oak being used exclusively in the wine trade here, the imports thereof are dependent on the success of that industry. Unfortunately, the vineyards of the colony have suffered severely from phylloxera and frosts during the past season or two, and it will, consequently, be some time before the present demand for American staves increases. Undoubtedly there is a good future here for American white oak, as it is found to be the most suitable for the Australasian wine trade, being much cheaper in price and of greater durability than the imports from other countries.

#### DIMENSIONS.

Dimensions of the white-oak staves mostly in use here are those 40 to 44 inches long,  $4\frac{1}{2}$  inches wide, and 1 inch in thickness; 4 feet 6 inches long,  $4\frac{1}{2}$  to 5 inches wide, and 2 inches thick; 6 feet long, 6 inches wide, and 3 inches thick. They should be of sound timber, well seasoned before shipment, and clear of all sap and overwood.

JOHN P. BRAY, *Consul-General.*

MELBOURNE, *December 18, 1899.*

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